REPORT

ON

DAMAGES FOR ENVIRONMENTAL HARM

ONTARIO LAW REFORM COMMISSION

1990

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The Ontario Law Reform Commission was established by the *Ontario Law Reform Commission Act* for the purpose of reforming the law, legal procedures, and legal institutions.

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Ontario
Law Reform
Commission

The Honourable Ian G. Scott, QC
Attorney General for Ontario

Dear Mr. Attorney:

We have the honour to submit herewith our *Report on Damages for Environmental Harm*.

CHAPTER 1

INTRODUCTION

This report has evolved out of our 1989 *Report on the Law of Standing*.

One of the most significant recommendations in that report was our proposal to abolish the public nuisance standing rule. Under this rule, proceedings in respect of a public nuisance or "public rights" or the "public interest" may be brought only by the Attorney General or by an individual, known as a "relator", to whom the Attorney General has given permission to bring the action. At present, private individuals do not have standing to bring proceedings without the consent of the Attorney General unless they have suffered a harm, or possess an interest, that distinguishes them from the rest of the public.[1]

In our 1989 report, we recommended that an entirely different approach be taken to standing in our courts: any person should be entitled to commence and maintain a proceeding unless the court is satisfied that the factors against proceeding outweigh the factors in favour of proceeding.[2] Responding to the particular barrier inherent in the public nuisance standing rule, we further recommended that no person should be denied standing only on the ground that the individual has no personal, proprietary, or pecuniary interest in the proceeding, or has suffered or may suffer injury or harm of the same kind or to the same degree as other persons.[3] Under our proposals, the Attorney General no longer would control who could bring proceedings.

In the *Report on the Law of Standing*, we emphasized that these proposals would have their greatest significance in the area of environmental law. Under the public nuisance standing rule, concerned individuals and environmental groups are effectively prevented from bringing civil proceedings to prevent or stop pollution and other forms of environmental harm, unless the Attorney General consents to the action being brought. Indeed, even individuals who have incurred financial losses may find that they do not have standing to seek a remedy because they have not suffered

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[1] For a discussion of the present law, see Ontario Law Reform Commission, *Report on the Law of Standing* (1989) (hereinafter referred to as the "Standing Report"), at 8-17.

[2] *Ibid.*, at 92.

[3] *Ibid.*, at 79.

"special damage", that is, harm that differs in kind from that suffered by the rest of the public.[4] Only if the activity also interferes with the use and enjoyment of land, thus constituting a "private nuisance", does an affected individual have standing to seek a remedy without the consent of the Attorney General, regardless of whether the harm threatened or inflicted is different from that potentially or actually caused to others.

Implicit in our general approach to standing is an acceptance of the legitimacy of private enforcement of the law through civil proceedings brought by individuals and groups. Private enforcement may serve as an important supplement to the "public" enforcement of legislation by the state through its various organs, such as the police and the investigative and prosecutorial staffs of the federal, provincial, and municipal governments.[5]

In this report, we recommend the creation of a new civil statutory remedy, an award of damages payable to compensate the public for harm done to the environment, entirely independent of any damages payable for injury caused to individuals or corporations. This remedy would be recoverable by a person who has standing, not for the plaintiff's own personal benefit but, as we shall see,[6] for the benefit of the public in the larger interest of protecting the environment. This new remedy would, of course, be available to the Crown as well.

Proceedings seeking damages for environmental harm would be governed by the favourable costs proposals that we made in the *Report on the Law of Standing*. In that report, we concluded that, without fundamental change to the present law of costs, our proposals for reform of the law of standing would be ineffective in practice, for the threat of paying the costs of their adversaries would deter individuals from bringing proceedings. Accordingly, we recommended that, in certain circumstances, courts should

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[4] *Ibid.*, at 15. But see *Environmental Protection Act*, R.S.O. 1980, c. 141, s. 87(2), as am. by S.O. 1988, c. 54, s. 34(1), and *Fisheries Act*, R.S.C. 1985, c. F-14, s. 42(3).

[5] In our Standing Report, we also recognized that, in some cases, allowing private individuals or groups to bring proceedings might improperly interfere with the exercise of prosecutorial discretion by the Attorney General or compromise the operation of a regulatory scheme. In such cases, the Attorney General or the relevant Minister of the Crown could seek intervenor status to make representations on the question of the plaintiff's standing or on the merits of the issues raised, including the remedies that should be granted. Where a defendant has acted in conformity with a regulatory scheme, we expected that he would notify the relevant Minister of the proceedings. Where, however, proceedings are brought to enjoin conduct that contravenes legislation, it is doubtful that a defendant would alert the Attorney General or the relevant Minister. Accordingly, we recommended that a person who commences a proceeding to enjoin conduct that is an offence under an Ontario or federal statute should be required to give notice of the proceedings to the Minister who is responsible for the administration of the statute; in the case of proceedings under the *Criminal Code*, we recommended that the notice should be given to the Attorney General for Ontario: Standing Report, *supra*, note 1, at 134-36.

[6] *Infra*, ch. 4.

not be allowed to order plaintiffs to pay costs to defendants, except where they have engaged in vexatious, frivolous or abusive conduct.[7]

The new remedy of damages for environmental harm, like that of the injunction, would supplement the statutory remedies available in environmental legislation.[8] In recommending the creation of this remedy, we accept the arguments in favour of reliance on private actions to buttress the enforcement of our environmental statutes. First, there can be little, if any, doubt that the protection of our environment is one of the most important issues of our day, reflecting a deep concern that is shared generally in the community.

Second, on a practical level, private enforcement of legislation is attractive because the resources of government are limited, constraining its ability to ensure compliance with the standards established under legislation.[9] Private actions can step into the breach and respond to environmental problems that would otherwise remain undetected and unresolved.

Third, as a matter of fundamental principle, in our *Report on the Law of Standing*, we rejected the notion that the Attorney General is the exclusive guardian of the public interest. Indeed, we rejected the idea that there existed a monolithic, unitary public interest that was capable of being represented by a single person. Rather, we took the view that, in some cases, individuals should be able to raise important issues, to argue for their own vision of the public interest, and to seek injunctive relief to stop activity that they believe is opposed to that vision. Whether a court would ultimately decide the issue would depend on whether they would be accorded standing under our more liberal standing test. In short, we endorsed the view that individuals have an interest in the governance of their society and the forces that affect them and, to the extent these matters may be decided in our courts, we rejected the assumption that a personal, proprietary, or pecuniary interest should be the only key to the courthouse door. We firmly

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[7] Such a rule will apply where all the following conditions have been met: where the proceeding involves issues the importance of which extends beyond the immediate interests of the parties involved; where the plaintiff has no personal, proprietary, or pecuniary interest in the outcome of the proceeding, or, if she has such an interest, it clearly does not justify the proceeding economically; where the issues have not been previously determined by a court in a proceeding against the same defendant; and where the defendant has a clearly superior capacity to bear the costs of the proceeding. We also recommended that, at any time in a proceeding, a person may ask the court to make a decision whether she will have an immunity from being ordered to pay costs. This recommendation followed from our conviction that the uncertainty whether a plaintiff would enjoy the proposed costs immunity might itself discourage that person from suing where she has little or no financial interest in the outcome of the proceeding: see Standing Report, *supra*, note 1, at 152-64.

[8] *Environmental Protection Act*, R.S.O. 1980, c. 141; *Ontario Water Resources Act*, R.S.O. 1980, c. 361; and *Pesticides Act*, R.S.O. 1980, c. 376.

[9] In 1988, Ontario had 52 pollution inspectors: Poch, *Corporate and Municipal Environmental Law* (1989), at 44.

believe that this perception of the place of the individual is particularly appropriate insofar as the protection of the environment is concerned.

Finally, it is important to bear in mind that private enforcement is a feature of our present legislative landscape, both generally and in the environmental context. Under the *Provincial Offences Act*,[10] individuals may bring private prosecutions, akin to criminal proceedings, in relation to the offences established under environmental legislation.[11] Moreover, one of the penalties that may be ordered by a court on a conviction is analogous to the remedy that we are recommending in this report.[12]

In the next chapter we shall set out the case for the creation of the new damages remedy briefly outlined above. In chapter 3, we examine the difficult issue of assessment of damages payable as compensation for harming the environment. In chapter 4, we consider problems in the administration of the damages award, having regard to the fact that damages are payable, not to compensate a plaintiff for his own loss, but for an injury to the environment, which is suffered by the public generally.

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[10] R.S.O. 1980, c. 400.

[11] However, the Attorney General may withdraw the charge or stay the proceedings: see *infra*, ch. 2, sec. 3(b).

[12] *Environmental Protection Act*, *supra*, note 8, s. 146d(1), as en. by S.O. 1986, c. 68, s. 15; *Ontario Water Resources Act*, *supra*, note 8, s. 71(1), as en. by S.O. 1986, c. 68, s. 41, as am. by S.O. 1988, c. 54, s. 88(b); and *Pesticides Act*, *supra*, note 8, s. 34d(1), as en. by S.O. 1986, c. 68, s. 47. See discussion, *infra*, ch. 2, sec. 3(b).

CHAPTER 2

THE CASE FOR A CIVIL DAMAGES REMEDY FOR ENVIRONMENTAL HARM

1. INTRODUCTION

A civil damages remedy that is designed to redress harm caused to the environment *and* is available to private individuals and groups would be a novel creation.[1] Environmental statutes in both Canada and the United States now provide for various remedies, but we could find no exact precedent for what we are proposing in this report.

Our recommendation to make a civil damages remedy available to the Crown would represent a more modest innovation. In Ontario, under existing environmental legislation, a polluter may be ordered to take remedial actions that are roughly analogous to being ordered to pay the type of damages that we recommend in this report. However similar, these measures nevertheless do not involve the payment of a compensatory amount for injury caused to the environment. Moreover, as we shall explain subsequently, these orders are not available to individuals in civil proceedings: they may be given as administrative orders by the Minister of the Environment[2] or by a Director appointed under the *Environmental Protection Act*,[3] or by the court, as a penalty, following a person's conviction under environmental legislation.[4]

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[1] But see *Ontario Environmental Rights Act, 1989*, Private Member's Bill 12, 1989 (34th Leg. 2d Sess.), which received First Reading on May 15, 1989, and Second Reading on June 29, 1989.

Section 10 provides that "[i]n an action commenced under this Act, if it has been established that the activity of the defendant has contaminated or degraded, or is likely to contaminate or degrade, the environment, the Court may grant either an interim or permanent injunction, order the defendant to remedy any damage caused by the defendant's activity, award damages, impose conditions on the defendant or make such other order as the Court may consider is necessary".

While the broad language of the provision would give the court an apparently unlimited remedial power, it is unclear whether damages of the kind we are proposing in this report was contemplated.

[2] *Environmental Protection Act*, R.S.O. 1980, c. 141, ss. 16 and 85, as am. by S.O. 1988, c. 54, ss. 12 and 33, respectively.

[3] *Ibid.*, s. 41(1). With respect to the meaning of "the Director" under the *Environmental Protection Act*, see s. 1(2) and s. 4, as am. by S.O. 1986, c. 68, s. 2.

[4] *Ibid.*, s. 146d(1), as en. by S.O. 1986, c. 68, s. 15; *Pesticides Act*, R.S.O. 1980, c. 376,

In the United States, while there is legislation at both the federal and state level providing for a damages remedy for at least some types of injury caused to the environment, proceedings may be brought only by the federal government or a state government.[5]

Our basic recommendation thus involves a significant addition to the remedial armoury available to combat pollution and other environmental harm. Though, in a sense, it will draw upon certain features of existing Ontario and American statutes, legislative implementation of our proposal would introduce an entirely new concept to environmental law. Given the novelty of our proposal, it is important that we explain and justify its provenance. That is the focus of this chapter.

We begin by stating why we favour a new civil damages remedy. We then consider the background of the existing law bearing upon remedies in the environmental context, which, in our view, argues for legislative intervention. We conclude with a discussion about the nature of this remedy.

2. POLICY REASONS

Much of our support for a civil damages remedy follows from the recommendations and underlying principles of our *Report on the Law of Standing*.[6] Implicit in our approach to standing is a philosophical perspective opposed to that anchoring the public nuisance standing rule. As a matter of first principle, we accept that, simply as an attribute of membership in the community, an individual may be entitled to bring civil proceedings to address a general or public harm, even where the activity of the defendant may be subject to regulatory schemes administered by the government. Whether ultimately he should be accorded that right would depend on the application of our proposed standing test.[7]

Our position contrasts sharply with the world envisioned by the public nuisance standing rule, which is neatly bifurcated into public and private hemispheres, with the former being the exclusive preserve of the Attorney

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s. 34d(1), as en. by S.O. 1986, c. 68, s. 47; and *Ontario Water Resources Act*, R.S.O. 1980, c. 361, s. 71(1), as en. by S.O. 1986, c. 68, s. 41, as am. by S.O. 1988, c. 54, s. 88(b).

[5] At the federal level, see Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. §9607(f). See discussion *infra*, ch. 3. With respect to state legislation, see Cross, "Natural Resource Damage Valuation" (1989), 42 Vand. L. Rev. 269, at 277-80, and Halter and Thomas, "Recovery of Damages by States for Fish and Wildlife Losses Caused by Pollution" (1982), 10 Ecology L.Q. 5, at 9.

[6] Ontario Law Reform Commission, *Report on the Law of Standing* (1989) (hereinafter referred to as "Standing Report").

[7] See *supra*, ch. 1, note 5.

General and the latter belonging to private persons. According to this perspective, there is no place for individual action where the public interest has been implicated. In the context of constitutional and administrative law, the Supreme Court of Canada has unequivocally rejected this vision, and has at least implicitly embraced a conception of the role of the individual that we endorse generally.[8]

We have thus accepted two basic premises. First, there may exist a public or a general harm, both generally and in the environmental context, that is independent of any injury suffered by individuals personally. Second, individuals may have a legitimate stake in taking action responsive to this harm, even though they are not directly affected.

In the standing report we discussed the injunction as the remedial vehicle by which an individual may seek to respond to an environmental harm. In this report, we turn to consider a new statutory damages remedy.[9]

It is important to emphasize that these damages are entirely distinct from any damages that may be awarded to individuals whose personal, proprietary, or pecuniary interests have been injured and, in respect of which, they could claim damages on an individual basis. There is thus no element of "double recovery" where a court awards damages in relation to environmental harm and damages to compensate individual losses.

As a matter of principle, we are of the view that the philosophical premises that we have accepted in our standing report can, and should, apply to the civil damages remedy. For example, the harm that occurred solely in the past and could have been the basis for an injunction should be capable of being remedied by means of a damages award.

The civil damages remedy that we propose is of critical importance because it would allow courts a degree of remedial flexibility that, as we shall see, does not exist under the present law. No doubt an injunction may be a very effective remedy in responding to activity causing environmental harm; yet, in many cases, it may be potentially Draconian in its impact.[10]

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[8] *Thorson v. Attorney General of Canada*, [1975] 1 S.C.R. 138, 43 D.L.R. (3d) 1; *Nova Scotia Board of Censors v. McNeil*, [1976] 2 S.C.R. 265, 55 D.L.R. (3d) 632; *Minister of Justice of Canada v. Borowski*, [1981] 2 S.C.R. 575, 130 D.L.R. (3d) 588; and *Minister of Finance of Canada v. Finlay*, [1986] 2 S.C.R. 607, 33 D.L.R. (4th) 321. For a discussion, see Standing Report, *supra*, note 6, at 17-30.

[9] Our standing proposals apply generally, and thus would apply to remedies under the *Judicial Review Procedure Act*, R.S.O. 1980, c. 224, and remedies under the *Canadian Charter of Rights and Freedoms*, being Part I of the *Constitution Act, 1982*, which is Schedule B of the *Canada Act 1982*, c. 11 (U.K.), as am. by the Constitution Amendment Proclamation, 1983, SI/84-102.

[10] The following discussion considers prohibitory injunctions only. The analysis, however, would apply equally to mandatory injunctions. As we explain in the next section, the principles governing the balancing of benefit and burden in the case of mandatory injunctions differ somewhat from those applicable to prohibitory injunctions.

A prohibitory injunction may force a defendant to stop certain profitable operations or even to close a factory completely. Where an injunction is the sole remedy, the only latitude available to a court is in the nature of the injunction that may be ordered: a court may soften its potential impact by issuing a limited or partial injunction[11] or by staying the operation of the injunction for a certain period of time.[12]

While the potential consequences of injunctive proceedings are most directly threatening to a defendant, an injunction may have important ramifications extending beyond the immediate parties to the litigation. The spectre of an injunction may be of concern to individuals employed by the enterprise whose jobs will be threatened by a plant closing. Where the defendant is the primary employer in a locality, the entire community may suffer economically from a total prohibitory injunction.

Given the possibly widespread effects of injunctive relief, it would be useful if courts were able to choose between injunctions and civil damages. This would allow an assessment of all the relevant competing factors, including the public interest in the preservation of the environment, as well as the impact on the defendant and the incidental social and economic costs of the injunction. Without a choice of remedy, a court that weighs the advantage of any type of injunctive relief against the burden that it would impose would be in an "all or nothing" situation.[13] Should it conclude that the burden of the injunction would be inordinate, its only recourse would be to deny the remedy. In such a case, the harm that has been caused to the environment would remain, and the interest of society in a safe and clean environment would be sacrificed. In these circumstances, an award of civil damages would fill the remedial lacuna, and vindicate that interest, but not at the cost of the other interests that persuasively weighed against ordering injunctive relief.

Civil damages would also be useful where a court is contemplating ordering a partial or suspended injunction as an alternative to a complete prohibition. Where an injunction is partial, the offensive activity will continue, albeit with diminished effect, allowing some degree of harm. Where

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[11] Rather than order a complete prohibition of an activity, a court may order modification of an activity or impose limitations on the time or other circumstances in which it is carried out. See, for example, *Walker v. Pioneer Construction Co. (1967) Ltd.* (1975), 8 O.R. (2d) 35, 56 D.L.R. (3d) 677 (H.C.J.), and *Rombough v. Crestbrook Timber Ltd.* (1966), 57 D.L.R. (2d) 49, 55 W.W.R. 577 (B.C.C.A.).

[12] In Ontario, staying the operation of an injunction has been ordered in numerous cases. See, for example, *Beamish v. Glenn* (1916), 36 O.L.R. 10 (App. Div.); *Russell Transport Ltd. v. Ontario Malleable Iron Co. Ltd.*, [1952] O.R. 621, [1952] 4 D.L.R. 719 (H.C.J.); and *Plater v. Collingwood*, [1968] 1 O.R. 81, (1967), 65 D.L.R. (2d) 492 (H.C.J.). For a discussion of suspended injunctions, see Sharpe, *Injunctions and Specific Performance* (1983), §§391-94, at 193-94.

[13] With respect to the willingness of courts to weigh the benefit of injunctive relief against the burden that it would entail, see *infra*, this ch., sec. 3(a).

the operation of an injunction is stayed, the harm will continue unabated. In either case, it should be possible for the court to order compensation for the injury that is being done to the environment.[14]

In endorsing the right of courts to choose between injunctions and damages, we are aware that there has been a debate concerning which remedy is more conducive to environmental protection.[15] The weight of commentary seems to favour injunctive relief, in support of which several reasons have been offered.[16] First, injunctive relief is said to be more consistent with the goals of environmental protection, since it actually halts the activity causing the harm. A prohibitory injunction will require the defendant to either modify the activity or cease it altogether. Damages, by contrast, can only indirectly achieve the same result, to the extent that the potential award of damages is sufficient to cause a prospective defendant to take measures to avoid liability in the first place. Where an award of damages is not sufficiently large to persuade a defendant to change its activity, it is contended that it would be tantamount to a licence to pollute.

Second, an injunction is a flexible remedy, insofar as the court can suspend its operation or make it partial. Courts may take into account the burden of the injunction on the defendant, although there is a danger that excessive solicitude may sacrifice environmental protection. Where a complete injunction is unnecessary in the circumstances, a partial injunction could be ordered. Supporters of injunctive relief argue that an award of damages, if substantial enough, could equally threaten the life of a defendant's business; yet, as an absolute remedy, it lacks the flexibility of an injunction.[17]

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[14] In cases of private nuisance, a suspended or partial injunction may be supplemented by an award of damages. In the case of suspended injunctions, see, for example, *Vancouver Waterfront Ltd. v. Vancouver Harbour Commissioners*, [1936] 1 D.L.R. 461, [1936] 1 W.W.R. 210 (B.C.C.A.), and *River Park Enterprises Ltd. v. Fort St. John* (1967), 62 D.L.R. (2d) 519 (B.C.S.C.). In the case of a partial injunction, see, for example, *Rombough v. Crestbrook Timber Ltd.*, *supra*, note 11.

[15] Compare, for example, McLaren, "The Common Law Nuisance Action and the Environmental Battle—Well-Tempered Swords or Broken Reeds?" (1972), 10 Osgoode Hall L.J. 505, and Emond, "Defences and Remedies To Common Law Causes of Action In The Environmental Field" (1984), The Canadian Bar Association—Ontario, Continuing Legal Education (February 4, 1984).

[16] McLaren, *supra*, note 15; Juergensmyer, "Common Law Remedies and Protection of the Environment" (1971), 6 U.B.C. L. Rev. 215; and Sax, *Defending the Environment: A Strategy for Citizen Action* (1971), at 119-20.

[17] McLaren, *supra*, note 15, at 559. In *Watkins v. Olafson* (1989), 61 D.L.R. (4th) 577, [1989] 6 W.W.R. 481 (S.C.C.), the court held that, in the absence of enabling legislation or the consent of all the parties, a court cannot order periodic payments instead of a lump sum award of damages. In Ontario, s. 129 of the *Courts of Justice Act, 1984*, S.O. 1984, c. 11, provides that, where all the affected parties consent, a court may order periodic payment of damages only for personal injuries or under Part V of the *Family Law Act, 1986*, S.O. 1986, c. 4, for loss resulting from the injury to or death of a person. For a discussion, see Ontario Law Reform Commission, *Report on Compensation for Personal Injuries and Death* (1987), at 155-57.

In our view, it is not necessary to resolve this controversy. We would simply leave the plaintiff to seek whichever remedy he thinks appropriate in the circumstances; ultimately the court would decide what remedy should be ordered.

It bears mentioning that this debate has occurred within the context of the existing law. Under the present law, the public nuisance action is relatively insignificant as a means of environmental protection due to the restrictive standing rules; in any event, courts have accepted that the injunction is the only available remedy. The remedial question has thus been considered against the background of the private nuisance action, where the choice is between an award of damages payable to an individual plaintiff in connection with an interference with the use and enjoyment of her land and an injunction that would stop the offensive activity altogether. Given these alternatives, the preference of environmental advocates for injunctive relief is easily understood: damages will benefit only the individual plaintiff, but will not ameliorate the environment.

Finally, the creation of a civil damages remedy can be supported on an economic basis as tending to promote the most efficient allocation of resources. We find very persuasive the following passage, which presents this argument in the context of discussing damages for the destruction of fish and wildlife:[18]

> To the extent that persons causing fish and wildlife losses are not held financially accountable, the costs of these losses are 'external' to those persons—the public pays these costs directly, while there is no impact on the polluters' business costs. In this situation, polluters have no economic incentive to reduce these fish and wildlife losses, because the cost of prevention will always be greater than the cost *to them* of the fish and wildlife destroyed. This is true even if the value to the public of the fish and wildlife is greater than the cost to the polluters of preventing the loss.
>
> Insofar as the legal system requires polluters to indemnify the public . . . for the destruction of fish and wildlife, they will need to 'internalize' (recognize on their books) at least part of the losses. As this happens, polluters will seek to maximize their profits by minimizing damage to fish and wildlife. This will be a rational course so long as the cost of avoidance (the amount spent to prevent an incremental loss of fish and wildlife) is less than the cost avoided (potential liability for that incremental loss). Eventually this behavior should result in a more efficient allocation of resources.

3. THE PRESENT LAW

In our view, the state of the existing Ontario law requires the enactment of a civil damages remedy. In this connection, we wish to make two points. First, it is doubtful whether a successful argument can be made that

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[18] Halter and Thomas, *supra*, note 5, at 7-8 (emphasis in original). See, also, Cross, *supra*, note 5, at 270-71.

implementation of our recommendations to expand standing to seek injunctive relief would result, by itself, in the judicial recognition of the civil damages remedy that we endorse in this report. Express legislation is therefore essential. Second, an examination of the present legislative remedies, both administrative and penal, in Ontario environmental statutes indicates that, in terms of the actual substantive impact on prospective defendants, our proposed remedy is but a modest extension.

We shall first discuss what may be called "judicial remedies", that is, injunctions and damages. We shall then consider statutory remedies.

(a) Judicial Remedies

Our reservations about relying on the recommended expansion of standing to bring in its train the judicial creation of a civil damages award can be explained briefly. The basis for anticipating such a development can be found in section 112 of the *Courts of Justice Act, 1984*:[19]

> 112. A court that has jurisdiction to grant an injunction or order specific performance may award damages in addition to, or in substitution for, the injunction or specific performance.

The argument based on a literal reading of this provision would be that, where an individual has standing to seek a prohibitory injunction to stop activity injurious to the environment, or standing to seek a mandatory injunction to remedy its effect, the court would be able to order damages in respect of that environmental harm.

Section 112 of the *Courts of Justice Act, 1984* is the current version of section 2 of the English *Chancery Amendment Act, 1858*,[20] popularly known as *Lord Cairns' Act*, which granted jurisdiction to the Court of Chancery to award damages essentially in the circumstances set out in the quoted provision. Until the enactment of this provision, and similar legislation in other

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[19] S.O. 1984, c. 11.

[20] 21 & 22 Vict., c. 27 (Imp.). Until the enactment of s. 112 of the *Courts of Justice Act, 1984*, the version of s. 2 of *Lord Cairns' Act* in force in Ontario stated that "the court may award damages *to the party injured*". For example, *The Judicature Act*, R.S.O. 1980, c. 223, s. 21, provided as follows:

> 21. Where the court has jurisdiction to entertain an application for an injunction against a breach of a covenant, contract or agreement, or against the commission or continuance of a wrongful act, or for the specific performance of a covenant, contract or agreement, the court may award damages to the party injured either in addition to or in substitution for the injunction or specific performance, and the damages may be ascertained in such manner as the court directs, or the court may grant such other relief as is considered just.

jurisdictions,[21] in practice the injunction was the only remedy in the case of continuing wrongs; courts of equity did not award damages.[22] Eventually, it was decided that the jurisdiction to award damages pursuant to this provision was not limited to the damages that were recoverable at common law. Only damages in relation to a past harm suffered by a plaintiff could be ordered by a common law court; it has been held that, under *Lord Cairns' Act*, so-called "equitable damages" may be ordered in relation to a prospective loss, that is, injury that has not yet been sustained.[23]

Notwithstanding the breadth of the language in section 112, which would seem to confer an unlimited jurisdiction to order damages,[24] there are two reasons that we are not sanguine about the possibility of courts using this authority to award damages for environmental harm in Ontario.

First, the very concept of damages payable in respect of harm to the public at large has not been clearly accepted by the courts; indeed, the remedy may not exist at all. In order to examine this question, given the present law of standing, one must investigate whether the right of the Attorney General to seek damages for public nuisance has ever been recognized. If the courts have acknowledged that such damages could be recovered by the Attorney General, confidence in the courts extending the availability of these damages to individuals may well be justifiable.

The scant authority bearing on this question makes it very difficult to divine a judicial position. While certain decisions seem to doubt that "public

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[21] In Ontario, *Lord Cairns' Act* was introduced by *The Court of Chancery Act*, S.C. 1865, c. 17, s. 3. After Confederation, it was re-enacted in *The Administration of Justice Act*, R.S.O. 1877, c. 40, s. 40. Thereafter, it appeared in successive revisions of *The Judicature Act* until the *Courts of Justice Act, 1984* was enacted.

[22] With respect to the inherent power of courts of equity to award damages, see Spry, *The Principles of Equitable Remedies* (3d ed., 1984), at 587-89.

[23] *Leeds Industrial Co-operative Society v. Slack*, [1924] A.C. 851, [1924] All E.R. Rep. 259 (H.L.) (subsequent reference is to [1924] A.C.). Viscount Finlay commented as follows (at 857):

> The power given is to award damages to the party injured, either in addition to or in substitution for an injunction. If the damages are given in addition to the injunction they are to compensate for the injury which has been done and the injunction will prevent its continuance or repetition. But if damages are given in substitution for an injunction they must necessarily cover not only injury already sustained but also injury that would be inflicted in the future by the commission of the act threatened. If no injury has yet been sustained the damages will be solely in respect of the damages to be sustained in the future by injuries which the injunction, if granted, would have prevented.

For a discussion, see McDermott, "Equitable Damages in Nova Scotia" (1989), 12 Dal. L.J. 131; Jolowicz, "Damages in Equity—A Study of Lord Cairns' Act", [1975] Cambridge L.J. 224; and Sharpe, *supra*, note 12, §§367-71, at 180-82.

[24] *Shelfer v. City of London Electric Lighting Co.*, [1895] 1 Ch. 287, at 315, [1891-94] All E.R. Rep. 838 (C.A.) (subsequent references are to [1895] 1 Ch.). For a discussion, see Law Reform Commission of British Columbia, *Report on Civil Litigation in the Public Interest*, LRC 46 (1980) (hereinafter referred to as "British Columbia Report"), at 70.

damages" may be awarded to an Attorney General in relation to public nuisance or an injury to the public,[25] statements in other cases may be interpreted as acknowledging that such damages may be ordered.[26] The relevant judicial statements are ambiguous so that it is difficult to determine whether the courts were attempting to enunciate general principles or confining their remarks to the particular circumstances of the cases before them.

However, in a 1983 decision, *The Queen v. The Ship Sun Diamond*,[27] the Federal Court Trial Division did accept that the Attorney General, on behalf of the Crown in right of Canada, could recover damages for public nuisance.[28] Damages had been claimed for the cost of cleaning Vancouver harbour after an oil spill. The court's brief discussion of public nuisance suggests that the basis for allowing damages was that the Attorney General was the guardian of the public interest generally and, as such, should strive to respond quickly to an oil spill, in which case it should recover this expense from the party that caused the harm.[29]

Apart from *Sun Diamond*, we found no decision supporting the concept of "public" damages. That they may be recovered by an Attorney General has also been doubted in certain commentaries. In its 1980 standing report, *Civil Litigation in the Public Interest*, the Law Reform Commission of British Columbia stated that it did not know of a single example of *Lord Cairns' Act* being used where the Attorney General had brought proceedings in

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[25] *Attorney-General for Ontario v. Canadian Wholesale Grocers Association* (1923), 53 O.L.R. 627, [1923] 2 D.L.R. 617 (App. Div.). See, also, *Attorney-General v. Wimbledon House Estate Company, Ltd.*, [1904] 2 Ch. 34, where the Attorney-General sought a mandatory injunction in connection with a contravention of a statute.

[26] *Manitoba Attorney General v. Adventure Flight Centres Ltd.* (1983), 22 Man. R. (2d) 142, 25 C.C.L.T. 295 (Q.B.), and *Attorney General Canada v. Ewen* (1893), 3 B.C.R. 468 (S.C.). It is also worth noting that, in 1971, the Ontario government brought a nuisance action against Dow Chemical in relation to mercury contamination of the St. Clair River. Damages were claimed for the loss of the fishery in the waterway and for the cost of dredging to remove the mercury remaining in the waterbed. After several years, the action was discontinued. What is significant in this context is that the Crown apparently did not doubt that the Attorney General could claim damages for public nuisance.

[27] [1984] 1 F.C. 3, (1983), 25 C.C.L.T. 19 (T.D.) (subsequent reference is to [1984] 1 F.C.).

[28] *Ibid.*, at 34.

[29] *Ibid.*, at 25-26. Walsh J. quoted the following passage from *State of California v. S.S. Bournemouth*, 307 F. Supp. 922 (U.S.D.C. 1969), at 929:

> Oil pollution of the nation's navigable waters by seagoing vessels both foreign and domestic is a serious and growing problem. The cost to the public, both directly and indirectly, of abatement is considerable. In cases where it can be proven that such damage to property does in fact occur, the governmental agencies charged with protecting the public interest have a right of recourse in rem against the offending vessel for damages to compensate for the loss.

relation to a public nuisance.[30] Sharpe, in his leading work on injunctions and specific performance, observed that "[i]f the Attorney-General establishes that a public nuisance exists, it is difficult to imagine a court awarding damages rather than an injunction".[31] These comments, it should be noted, were made prior to the *Sun Diamond* case.

With uncertainty about the ability of the Attorney General to recover damages in relation to public nuisance, which may put in doubt the very existence of damages in relation to a public harm, express legislative intervention is necessary.

Finally, it bears noting that in 1982 the High Court of Australia held that the New South Wales incarnation[32] of *Lord Cairns' Act* did not apply to public wrongs, and therefore did not authorize an award of damages to a plaintiff who had standing to complain about the violation of a public right under a statute. In its view, *Lord Cairns' Act* was concerned exclusively with the infringement of private rights.[33]

The second reason that we are not prepared to rely simply on our proposed expansion of standing, coupled with section 112 of the *Courts of Justice Act, 1984*, is that we are doubtful that courts will engage in determining whether the appropriate remedy is an injunction or damages, informed by a proper consideration of the competing interests. The principles governing prohibitory injunctions differ somewhat from those governing mandatory injunctions.

In the case of prohibitory injunctions, in exercising their jurisdiction under section 112, Canadian courts generally have not undertaken a balancing of interests, and have been reluctant to order damages instead of injunctive relief. The injunction has been the preferred remedy.[34] Even though the governing principles have evolved within the very different context of the action for private nuisance,[35] they nonetheless constitute the

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[30] British Columbia Report, *supra*, note 24, at 70.

[31] Sharpe, *supra*, note 12, §259, at 123.

[32] *Supreme Court Act, 1970*, 1970, No. 52, s. 68.

[33] *Wentworth v. Woollahra Municipal Council* (1982), 56 A.L.J.R. 745.

[34] For a discussion, see Sharpe, *supra*, note 12, §§367-90, at 180-92.

[35] With respect to the applicable principles where a private plaintiff brings proceedings in relation to his own personal loss in public nuisance, Sharpe, *supra*, note 12, §260, at 123-24, commented as follows:

> [T]here will be relatively few cases where a private plaintiff is able to sue in respect of a public nuisance if it does not also constitute a private nuisance. Where an individual does sue in respect of a public nuisance, it would seem that the remedial principles . . . with respect to the choice between damages and an injunction will apply.

only jurisprudential analogy that will be available to courts. Encumbered with this analytical background, courts asked to order a prohibitory injunction may not assess the relative advantages and disadvantages of each remedy in the circumstances. Moreover, should damages of the kind we endorse be claimed, some courts may consider themselves constrained to order them only in the relatively narrow circumstances in which some courts have held them to be available under section 112.

In England, the classic statement of the test for damages under section 112 was enunciated in 1895 by the English Court of Appeal in *Shelfer v. City of London Electric Lighting Co.*:[36]

> In my opinion, it may be stated as a good working rule that—
>
> (1) If the injury to the plaintiff's legal rights is small,
>
> (2) And is one which is capable of being estimated in money,
>
> (3) And is one which can be adequately compensated by a small money payment,
>
> (4) And the case is one in which it would be oppressive to the defendant to grant an injunction:—
>
> then damages in substitution for an injunction may be given.

Sharpe observes that, while this test undoubtedly favours injunctive relief, it implicitly accepts that, it may be appropriate to balance benefit and burden, in certain circumstances, insofar as the court must evaluate the degree of injury suffered by the plaintiff and the impact of the injunction on the defendant. Yet courts in England generally have refused to undertake such an analysis, with injunctions being the presumed remedy.[37] Courts therefore have been loath to weigh the benefit of the injunction to the plaintiff against the burden that it would impose on the defendant or the wider public.

By contrast, there is a line of Canadian cases that clearly accepts that it is appropriate to balance the advantage of the injunction to the plaintiff against the magnitude of the burden imposed on the defendant and its potential social and economic effect on the community.[38] Notwithstanding authoritative support for this more flexible approach, the prevailing view

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[36] *Shelfer v. City of London Electric Lighting Co.*, *supra*, note 24, at 322-23 (*per* Smith L.J.). Lindley L.J. (*ibid.*, at 317) noted that an injunction would be ordered except in the case of "trivial and occasional nuisances: cases in which a plaintiff has shown that he only wants money; vexatious and oppressive cases; and cases where the plaintiff has so conducted himself as to render it unjust to give him more than pecuniary relief".

[37] Sharpe, *supra*, note 12, §374, at 184.

[38] *Ibid.*, §§379-90, at 186-92.

in Canada seems to be that, once a private nuisance is established, an injunction should be ordered.[39]

The preference for injunctions may be understandable as a historical matter, given the traditionally sacrosanct status of property, and more particularly, land, in our law. Indeed, injunctive relief arguably may be the remedy more consistent with the concept of property.[40] Yet, even in the context of private nuisance, flexibility and remedial choice has been endorsed as the better approach.[41]

Regardless of the defensibility of the courts' treatment of private nuisance, we believe that their approach is inappropriate where an individual is seeking relief in connection with environmental harm. In such cases, it is our view that a court should be required to decide which remedy should be ordered by balancing all the factors that it considers relevant. Its analysis should not be skewed by a presumption in favour of injunctive relief rooted in property concepts that have no relevance in the circumstances. Yet that may be the result if we rely simply on our liberalization of standing to lead to the creation of a damages remedy. Should the courts' response be conditioned by the existing law, the development of this remedy may not occur at all.[42]

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[39] *Ibid.*, §384, at 188.

[40] On this point, Sharpe, *ibid.*, §368, at 181, explained as follows:

> The reason for the primacy of injunctive relief is that an injunction more accurately reflects the substantive definition of property than does a damages award. It is the very essence of the concept of property that the owner should not be deprived without his consent. An injunction brings to bear coercive powers to vindicate that right. Compensatory damages for a continuous and wrongful interference with a property interest offers only limited protection in that the plaintiff is, in effect, deprived of his property without his consent at an objectively determined price. Special justification is required for damages rather than an injunction if the principle of autonomous control over property is to be preserved. A damages award rather than an injunction permits the defendant to carry on interfering with the plaintiff's property. Even if the plaintiff would have 'sold' his right to be free from the interference, denial of an injunction constitutes a denial of an attribute of ownership. Compensation to the plaintiff for the interference is fixed by the court in the form of damages, rather than by the plaintiff in the form of a bargained-for price. Damages will be assessed on an objective basis, measured by the market value of the decrease in the value of the plaintiff's property, and any peculiar or personal value which the plaintiff puts on his property will not ordinarily be reflected in such an award.

[41] Sharpe, *ibid.*, §408-09, at 201-02.

[42] The recent decision of the Supreme Court of Canada in *LAC Minerals Ltd. v. International Corona Resources Ltd.* (1989), 61 D.L.R. (4th) 14, may signal a more flexible approach to remedial questions. In the context of considering a restitutionary claim, Madame Justice Wilson and Mr. Justice La Forest evinced a willingness to collapse the technical distinctions between similar causes of action in order to grant the most appropriate remedy in the circumstances. Whether their philosophy augurs more generally for greater openness and flexibility in the future in dealing with questions of remedial choice remains to be seen.

Another problem is that, even where the courts do engage in a balancing of benefit and burden, they fail to weigh a matter that, in our view, is of critical importance. Courts consider, on the one hand, the benefit conferred on the plaintiff, and, on the other, the burden imposed by an injunction on the defendant and the public at large.[43] Yet they do not place on the scales the public interest in the protection of the environment.[44] This omission may be understandable, since the gravamen of the private nuisance action is the vindication of a plaintiff's personal interest in land. But it cannot be justified in the context of a proceeding brought by an individual in response to environmental harm, where the importance of securing the health of the environment, entirely independent of the injury suffered by individuals, is the foundation of the claim for relief.

In the case of mandatory injunctions, it is considered appropriate to weigh the benefit of the injunction to a plaintiff against the cost that would be imposed on the defendant.[45] Thus, while there may be a greater latitude to order damages as an alternative, there remains the problem that the interests that are balanced in deciding whether to order a mandatory injunction are the private interests of the parties. Against this background, courts may be loath to consider the public interest in environmental protection that lies at the heart of this report.

In concluding that legislation should be enacted to create a civil damages remedy, we draw support from the Law Reform Commission of British Columbia's *Report on Civil Litigation in the Public Interest*,[46] which deals primarily with standing.[47]

The British Columbia Law Reform Commission endorsed the principle that, in cases of public nuisance, courts should have a discretion to order damages to supplement or replace an injunction.[48] It took the view that,

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[43] See, for example, *Black v. Canadian Copper Co.* (1917), 12 O.W.N. 243 (H.C. Div.), aff'd (1920), 17 O.W.N. 399 (App. Div.), and *Bottom v. Ontario Leaf Tobacco Co. Ltd.*, [1935] O.R. 205, [1935] 2 D.L.R. 699 (C.A.).

[44] See MacLaren, *supra*, note 15, at 40, and Emond, *supra*, note 15, at 16-17. A similar failure appears in the *Lakes and Rivers Improvement Act*, R.S.O. 1980, c. 229. Section 39(1)(a) provides that, where an injunction is claimed against the owner or occupier of a mill, the court may balance "the importance of the operation of the mill to the locality in which it operates and the benefit and advantage, direct and consequential, which the operation of the mill confers on that locality and on the inhabitants . . . against the private injury, damage or interference complained of". This provision was first enacted by *The Lakes and Rivers Improvement Amendment Act, 1949*, S.O. 1949, c. 48, s. 6, as a response to *McKie v. K.V.P. Co. Ltd.*, [1948] 3 D.L.R. 201 (H.C.J.), aff'd [1949] 1 D.L.R. 39 (C.A.), where the court granted an injunction against a mill that was "virtually the sole employer in the community": Sharpe, *supra*, note 12, §402, at 197.

[45] Sharpe, *supra*, note 12, §378, at 186.

[46] *Supra*, note 24.

[47] For a discussion, see Standing Report, *supra*, note 6, at 187-93.

[48] British Columbia Report, *supra*, note 24, at 70.

based on the apparently unlimited jurisdiction to award damages conferred by *Lord Cairns' Act*, "it could be argued that the court could therefore award such damages where, as a result of our recommendation, a private individual who has suffered no damage brings an action in respect of a public nuisance".[49] Yet the Commission preferred to rely on specific legislation for implementation of the fundamental principle.

Its stated reasons were twofold. First, as noted earlier, the Commission found no case in which *Lord Cairns' Act* had been applied where the Attorney General had brought a proceeding concerning a public nuisance. Second, the Commission was concerned about the assessment and application of damages for public nuisance; criteria established by the courts under the Act might not be instructive, insofar as they focused on the harm suffered personally by the plaintiff. Given the breadth of *Lord Cairns' Act*, the Commission wished to limit the damages "to an amount that represents the cost of remedying or repairing the effects of the nuisance".[50]

(b) Statutory Remedies

In the introduction to this chapter, we suggested that the remedy that we are proposing may have an effect on defendants similar to that of certain remedies that are available under current environmental legislation. In this sense, our basic recommendation builds upon the existing remedies to which persons causing environmental harm may be subject, and represents a modest, but important, extension. However, by allowing the remedy to be sought in civil actions and by private individuals and groups, we are broadening the scope of potential civil liability.

The existing remedies that are of interest for purposes of comparison are of two types. With a single exception, the remedies are orders that are administrative in nature, given either by the Minister of the Environment or by a Director appointed under the *Environmental Protection Act*. One remedy, however, is penal, and may be ordered by a court following a conviction under environmental legislation.

The administrative orders that may be given under environmental legislation require a person to take action to repair or restore the environment, which would involve expenditures that are tantamount to paying an amount of damages representing the harm that has been caused. Under section 16 of the *Environmental Protection Act*, where a person causes or permits the discharge into the natural environment of a contaminant that injures or damages land, water, property, or plant life, and where the Minister of the Environment is of the opinion that it is in the public interest to do so, he may order that person to do whatever is necessary to repair the injury or

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[49] *Ibid.*

[50] *Ibid.*, at 71.

damage.[51] Under section 41(1) of the Act, "[w]here waste has been deposited upon, in, into, or through any land . . . or in any building that has not been approved as a waste disposal site, the Director may order the occupant or the person having charge and control of such land or building to remove the waste and to restore the site to a condition satisfactory to the Director". Furthermore, where there is a failure to comply with this order, the Director may have the necessary work done and charge the cost to the person who has ignored the order. This cost may be recovered in court.[52]

Under Part IX of the *Environmental Protection Act*—popularly known as the "Spills Bill"—the Minister of the Environment may make an order requiring a person to restore the natural environment. Such an order may be given "[w]here a pollutant[53] is spilled[54] and the Minister is of the opinion that there is or is likely to be an adverse effect and that it is in the best interest of the public to make an order".[55] The possible content of the order is set out in section 85(2):

> 85.—(2) In an order under this section, the Minister may require the doing of everything practicable or the taking of such action as may be specified in the order in respect of the prevention, elimination and amelioration of the adverse effects and the restoration of the natural environment within such period or periods of time as may be specified in the order.

The meaning of restoration of the natural environment is defined:[56]

> 'restore the natural environment', when used with reference to a spill of a pollutant, means restore all forms of life, physical conditions, the natural environment and things existing immediately before the spill of the pollutant that

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[51] *Environmental Protection Act*, *supra*, note 2, s. 16. See, also, *Pesticides Act*, *supra*, note 4, s. 23(1), as am. by S.O. 1988, c. 54, s. 97.

[52] *Environmental Protection Act*, *supra*, note 2, s. 41(2).

[53] "Pollutant" is defined to mean "a contaminant other than heat, sound, vibration or radiation, and includes any substance from which a pollutant is derived": *ibid.*, s. 79(1)(f).

[54] Section 79(1)(j), *ibid.*, defines "spill" as follows:

> (j) 'spill', when used with reference to a pollutant, means a discharge,
>
> (i) into the natural environment,
>
> (ii) from or out of a structure, vehicle or other container, and
>
> (iii) that is abnormal in quality or quantity in light of all the circumstances of the discharge,
>
> and when used as a verb has a corresponding meaning.

[55] *Ibid.*, s. 85(1), as am. by S.O. 1988, c. 54, s. 33.

[56] *Ibid.*, s. 79(1)(i).

> are affected or that may reasonably be expected to be affected by the pollutant, and 'restoration of the natural environment', when used with reference to a spill of a pollutant, has a corresponding meaning.

From the language of this definition, it is apparent that a restoration order has the potential to impose significant costs on a person against whom it has been made.

The *Environmental Protection Act* establishes a number of offences, for which various penalties may be ordered by a court upon conviction.[57] The penalty to which we wish to draw attention is a restoration order, which is described as follows:[58]

> 146d.—(1) Upon its own initiative or upon application by counsel for the prosecutor, the court that convicts a person of an offence under any other section of this Act, in addition to any other penalty imposed by the court, may order the person to take all or part of the action applied for to prevent, decrease or eliminate the effects on the natural environment of the offence and to restore the natural environment within the period or periods of time specified in the order.

For purposes of this provision, the meaning of the phrase "restore the environment" is not defined.[59]

Offences under environmental legislation are governed by the *Provincial Offences Act*.[60] While any person may launch a prosecution in relation to an environmental offence, two general aspects of provincial offences should be noted. First, the Attorney General has a right to withdraw a charge or enter a stay of proceedings.[61] Second, the usual criminal burden of proof applies to these proceedings; a person cannot be convicted of an offence unless there is proof beyond a reasonable doubt. Individually, and in combination, these features would tend to diminish the practical availability of this remedy.

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[57] See, generally, *Environmental Protection Act*, *ibid.*, Part XIV (Miscellaneous). Offences are also established under the *Ontario Water Resources Act*, *supra*, note 4, and the *Pesticides Act*, *supra*, note 4.

[58] *Supra*, note 2, s. 146d(1), as en. by S.O. 1986, c. 68, s. 15. See, also, *Pesticides Act*, *supra*, note 4, s. 34d(1), and *Ontario Water Resources Act*, *supra*, note 4, s. 71(1), which are identical to s. 146d(1).

[59] The definition of "restore the natural environment" in s. 79(1)(i) is applicable only to Part IX (Spills) of the *Environmental Protection Act*.

[60] R.S.O. 1980, c. 400.

[61] Section 33(1) of the *Provincial Offences Act* "affirms, but does not define, the Attorney General's right to withdraw a charge": Drinkwalter and Ewart, *Ontario Provincial Offences Procedure* (1980), at 138.

4. THE NATURE OF THE PROPOSED CIVIL DAMAGES REMEDY

At this juncture, we wish to comment on the nature of the proposed damages remedy. We have explained its essential purpose, that is, to require that a person pay compensation for harm that he has done to the environment. To this end, we have recommended that this remedy may be sought both by private individuals and groups and by the Crown. We recommend that the harm for which damages may be awarded should be a past injury. We further recommend that a court should be able to award damages in lieu of an injunction in connection with a future harm, as under the present law of private nuisance; where a suspended injunction or a partial injunction is ordered, the injury that necessarily will be permitted to continue should be the basis for damages.

In our discussion of the present law, we emphasized the importance of the court engaging in a proper weighing of the competing interests when it considers whether an injunction or damages is the appropriate remedy. Under the existing law, where courts do purport to engage in a balancing of interests, they ignore the public interest in a clean environment. If this factor is to be weighed in the balance, express legislative guidance must be given. Accordingly, we recommend that in determining whether to order an injunction or damages in connection with environmental harm, the court should be required to balance all the relevant factors, including the public interest in the protection of the environment, the impact on the defendant, and the social and economic consequences of each remedy.

As we have indicated earlier, these damages will relate to a generalized or "public" harm to the environment, the very type of injury that may be the foundation of a claim for injunctive relief. At the risk of belabouring the point, our concern is not with the private harm suffered by individuals or corporations as a consequence of the same act or omission causing the widespread environmental harm. To the extent that the existing law of standing presents barriers to securing redress for these injuries, we have already addressed this matter in our *Report on the Law of Standing*.[62]

Throughout this report we have described the proposed statutory remedy as "damages for environmental harm" without explaining what we mean by "environmental harm". At the very least, for the purpose of awarding these damages, it is our view that the "environment" should be the natural environment, the protection and conservation of which is the purpose of the *Environmental Protection Act*.[63] That Act defines "natural environment" to mean "the air, land and water, or any combination or part thereof, of the Province of Ontario".[64] Assuming acceptance of the policy

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[62] *Supra*, note 6, at 79.

[63] *Supra*, note 2, s. 2.

[64] *Ibid.*, s. 1(1)(k). "Air", "land", and "water" are separately defined: *ibid.*, s. 1(1)(aa), (e), and (q), as am. by S.O. 1986, c. 68, s. 1(1)(a).

arguments presented earlier in our chapter, we doubt whether there would be any controversy in providing that, at a minimum, injury to the natural environment should be redressed by damages.

Yet there is a question whether protection and, therefore, the recommended civil damages remedy, should extend beyond the natural environment to a more comprehensive vision of the "environment". A Private Member's Bill, now before the Ontario Legislative Assembly, reflects an expansive view of the "environment", which it seeks to protect through various mechanisms.[65] Entitled the *Ontario Environmental Rights Act, 1989*, Bill 12 has borrowed the definition of "environment" from that used in the *Environmental Assessment Act*.[66] Section 1 of the Bill provides, in part, as follows:

> 'environment' means,
>
> (a) air, land or water,
>
> (b) plant and animal life, including people,

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[65] Section 2 of the proposed *Ontario Environmental Rights Act, 1989*, *supra*, note 1, declares the purposes of the Act to be as follows:

> 2. The purpose of this Act is to ensure the health and sustainability of the environment of Ontario and, in particular,
>
> (a) to facilitate the participation of the people of Ontario in decisions affecting the environment and their ability to protect their common interest in a healthy and sustainable environment;
>
> (b) to recognize the right of the people of Ontario to an environment that is adequate for their health and well-being and sustainable into the future; and
>
> (c) to recognize the obligations of the Province of Ontario to conserve and maintain the resources of the Province for present and future generations.

Its philosophy is set out in section 3 as follows:

> 3.—(1) The people of Ontario have a right to a healthy and sustainable environment, including clean air and water, to the conservation of the natural, scenic, historic and aesthetic values of the environment, and to the protection of ecosystems and biological diversity.
>
> (2) The Province of Ontario, as trustee of Ontario's public lands, waters and natural resources, shall conserve and maintain them for the benefit of present and future generations.
>
> (3) It is hereby declared that it is in the public interest to provide every person with an adequate remedy to protect and conserve the environment and the public trust therein from contamination and degradation.

[66] R.S.O. 1980 c. 140, s. 1(c).

(c) the social, economic and cultural conditions that influence the life of people or a community,

(d) any building, structure, machine or other device or thing made by people,

(e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from the activities of people, or

(f) any part or combination of the foregoing and the inter-relationships between any two or more of them,

in or of Ontario.

The breadth of this definition is immediately apparent. Whether it should be adopted for the purposes of this report is a matter on which we shall not pass judgment. Given that the question is now clearly in the political arena, we shall not enter the fray in the relatively narrow context of a single remedy.[67] How "environment" should be defined would seem to depend ultimately on the outcome of a larger, more profound environmental debate that touches a number of issues.

Similarly, the meaning of "harm" is a matter on which we prefer to reserve judgment for the reasons set out above. The *Environmental Protection Act* relies on the concept of "adverse effect" in certain circumstances to identify the harm with which it is concerned.[68] This expression is defined as follows:[69]

'adverse effect' means one or more of,

(i) impairment of the quality of the natural environment for any use that can be made of it,

(ii) injury or damage to property or to plant or animal life,

(iii) harm or material discomfort to any person,

(iv) an adverse effect on the health of any person,

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[67] Recently, the partisan nature of this issue was illustrated by the debates in the Legislative Assembly concerning the *Aggregate Resources Act, 1989*, S.O. 1989, c. 23, where there was a difference in approach along party lines: see *Ont. Leg. Ass. Deb.*, June 19, 1989, at 1373-74.

[68] Section 13(1) of the *Environmental Protection Act*, *supra*, note 2, as en. by S.O. 1988, c. 54, s. 10, provides that "[n]otwithstanding any other provision of this Act or the regulations, no person shall discharge a contaminant or cause or permit the discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect". Part IX (Spills) is concerned with the spill of a pollutant "that causes or is likely to cause an adverse effect": *ibid.*, ss. 80(1), 81(1), 82(1), and 85(1), as am. by S.O. 1988, c. 54, ss. 29(1), 30(1), 31(1), and 33, respectively.

[69] *Ibid.*, s. 1(1)(a), as en. by S.O. 1986, c. 68, s. 1(1)(b), as am. by S.O. 1988, c. 54, s. 1(1).

(v) impairment of the safety of any person,

(vi) rendering any property or plant or animal life unfit for use by man,

(vii) loss of enjoyment of normal use of property, and

(viii) interference with the normal conduct of business.

By contrast, Bill 12 takes a somewhat broader view of the damage or injury to the environment that it seeks to address. The Bill is concerned with the contamination or degradation of the environment. The definition of "contaminant" draws on the definition of "adverse effect" in the *Environmental Protection Act*, and uses virtually identical language.[70] The definition of "degradation" would tend to expand the scope of harm to which the legislation is directed, insofar as it comprehends serious damage to the environment that is caused other than by contamination.[71]

As with the meaning of "environment", we would leave the meaning of "harm", or whatever term is chosen, to be decided in the political arena where, in effect, it has already been placed by Bill 12.

Finally, mention should be made of the case where a person against whom proceedings are brought is acting in full compliance with an order or approval of the Minister of the Environment or a Director. In our view, the jurisdiction to award civil damages for environmental harm should not necessarily be precluded in these circumstances. As we pointed out in the

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[70] Section 1 of the Bill provides, in part, as follows:

> 'contaminant' means any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from the activities of people which may,
>
> (a) impair the quality of the environment or the public trust therein for any use that can be made of it,
>
> (b) cause injury or damage to property or to plant or animal life,
>
> (c) cause harm or material discomfort to any person,
>
> (d) adversely affect the health or impair the safety of any person,
>
> (e) render any property or plant or animal life unfit for use by people,
>
> (f) cause loss of enjoyment of normal use of property, or
>
> (g) interfere with the normal conduct of business,
>
> and 'contaminate' and 'contamination' have corresponding meanings.

The reference to "the public trust" in clause (a) is an addition reflecting the guiding philosophy of the Bill: see note 65, *supra*.

[71] Section 1 defines "degradation" to mean "any destruction or significant decrease in the quality of the environment or the public trust therein other than a change resulting from contamination", and "degrade" is said to have a corresponding meaning.

Report on the Law of Standing,[72] we would expect that this matter would be raised, either by the defendant or by the Ministry as an intervenor, on a motion challenging the right of a plaintiff to maintain the proceeding or on the hearing of the merits of that proceeding. In leaving this matter to be resolved by the courts in individual cases, we observe that the question of conformity with "legislative authority" in cases of private nuisance has been left to be developed by the courts.[73] In some cases, however, this issue has been resolved by legislation.[74]

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[72] *Supra*, note 6, at 135-36.

[73] For a discussion, see Fleming, *The Law of Torts* (7th ed., 1987), at 408-09; Emond, *supra*, note 15; and Cullingham, "Nuisance", in Rainaldi (ed.), *Remedies in Tort* (1988), Vol. 3, §§49-58.

[74] The *Ontario Water Resources Act*, *supra*, note 4, s. 30, as en. by S.O. 1988, c. 54, s. 69, provides:

> 30. Sewage works that are being or have been constructed, maintained or operated in compliance with this Act, the *Environmental Protection Act* and the regulations under both Acts and with any order, direction or approval issued under the authority of this Act or any predecessor of any provision of this Act shall be deemed to be under construction, constructed, maintained or operated by statutory authority.

Compare the *Fisheries Act*, R.S.C. 1985, F-14, s. 42(8), which provides:

> 42.—(8) No civil remedy for any act or omission is suspended or affected by reason only that the act or omission is authorized under this Act, is an offence under this Act or gives rise to civil liability under this Act.

Yet a different approach is taken in the proposed *Ontario Environmental Rights Act, 1989*, *supra*, note 1:

> 9.—(2) It shall be a defence to an action commenced under this Act that the activity of the defendant is authorized by a standard established by or under an Act listed in the Schedule unless the plaintiff can establish, on a balance of probabilities, that the activity has caused, or is likely to cause, severe or irreparable contamination or degradation to the environment.

CHAPTER 3

THE ASSESSMENT OF DAMAGES FOR HARM TO THE ENVIRONMENT

1. INTRODUCTION

In the previous chapter, the Commission recommended that a statutory civil damages remedy be enacted for injury to the environment. The issue that must be addressed, therefore, is which methodology ought to be utilized by the courts to assess environmental harm.

Where environmental assets are publicly held for free use, individuals have a substantial inducement to overconsume these assets.[1] A person who pollutes an environmental site may reap the economic benefit of the polluting activity, while escaping any expense to himself from the injury caused by the pollution.[2] In other words, to the extent that those responsible for destroying environmental resources are not held financially accountable, the costs of these losses are "external" to these polluters.[3] Resource economists, a significant proportion of lawyers in the environmental field, as well as many public officials are of the firm conviction that those responsible for injuring the environment should bear the *full* economic costs of this harm, referred to as the internalization of an external cost.[4] In the last twenty years, there has been a proliferation of legislation that seeks to make persons whose activities have a deleterious effect on the environment accountable for their actions.[5] However, since these statutes have not

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[1] Cross, "Natural Resource Damage Valuation" (1989), 42 Vand. L. Rev. 269, at 270-71. In this chapter we have relied considerably upon the analysis in this article.

[2] *Ibid.*

[3] Halter and Thomas, "Recovery of Damages by States for Fish and Wildlife Losses Caused by Pollution" (1982), 10 Ecology L.Q. 5, at 7. See *supra*, ch. 2, at text accompanying note 18.

[4] Halter and Thomas, *supra*, note 3, at 8; Cross, *supra*, note 1; Dower and Scodari, "Compensation for Natural Resource Injury: An Emerging Federal Framework" (1987), 4 Marine Resource Econs. 155, at 166; and see *Ontario Environmental Rights Act, 1989*, Bill 12, 1989 (34th Leg., 2d Sess.), a Private Member's Bill that received First Reading on May 15, 1989, and Second Reading on June 29, 1989; and United Nations, *Stockholm Declaration on the Human Environment* (1972), U.N. Doc. A. Conf. 48/14, 11 Int. Leg. Mat. 1416.

[5] See, for example, *Environmental Protection Act*, R.S.O. 1980, c. 141; *Endangered Species Act*, R.S.O. 1980, c. 138; *Ontario Water Resources Act*, R.S.O. 1980, c. 361; *Provincial Parks Act*, R.S.O. 1980, c. 401; *Historical Parks Act*, R.S.O. 1980, c. 199; *Lakes and Rivers Improvement Act*, R.S.O. 1980, c. 229; *Pesticides Act*, R.S.O. 1980, c. 376; *Canadian Environmental Protection Act*, S.C. 1988, c. 22; and *Fisheries Act*, R.S.C. 1985, c. F-14.

introduced the notion of a civil damages remedy, the environmental legislation provides no guidance to the courts on the methods that ought to be employed to measure environmental damage.

Although there is no unanimity among those active in the environmental field as to the appropriate methodology to assess damages for harm caused to the environment, a consensus does exist that the traditional methods used by the courts to calculate damages, such as market valuation, are generally not appropriate.[6] Complete internalization of external costs in any particular context is rarely accomplished. The essential problem with importing methodologies used to calculate damages for private property to such assessment in respect of public property is that fundamental differences exist between the two. Markets are generally lacking for environmental assets and control of natural resources is often vested in government. Unlike private goods, environmental resources are generally not for sale.[7] As Carson and Navarro have stated, "rarely are public and private goods close substitutes for each other and even rarer in the damage assessment arena are they the perfect substitutes necessary to argue for the greater validity and reliability of using observed prices in private markets to price public goods".[8]

In the last decade, economists have made significant advances in developing and perfecting methodologies to measure the value of non-marketed goods.[9] The search for accurate methods with which to evaluate damages for harm to our resources is critical, since a proper assessment of damages against those responsible for injuring the environment will serve as a deterrent to future polluters and will ensure the continued existence of our ecosystems.[10] As the Chief Justice of the United States Court of Appeals, First Circuit, stated:[11]

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[6] Anderson, "Natural Resource Damages, Superfund, and the Courts" (1989), 16 B.C. Envtl. Aff. L. Rev. 405, at 443; Carlson, "Making CERCLA Natural Resource Damage Regulations Work: The Use of the Public Trust Doctrine and Other State Remedies" (1988), 18 E.L.R. 10299, at 10301-02; Atkeson and Dower, "The Unrealized Potential of SARA" (1987), 29 Envir. 1, at 10; Newlon, "Defining the Appropriate Scope of Superfund Natural Resource Damage Claims: How Great an Expansion of Liability?" (1985), 5 Va. J. Nat. Resources L. 197, at 205; Dower and Scodari, *supra*, note 4, at 167; Brett, "Insuring Against the Innovative Liabilities and Remedies Created by Superfund" (1986), UCLA J. Envtl. L. & Pol'y 1, at 36; Johnson, "Natural Resource Damage Assessment under CERCLA: Flawed Regulations may Limit Recoveries" (1987), 2 Nat. Envtl. En. J. 3, at 4; and Irvine, "Annotation" (1982), 30 C.C.L.T. 137.

[7] Anderson and Bishop, "The Valuation Problem", in Bromley (ed.), *Natural Resource Economics* (1986) 89, at 90.

[8] Carson and Navarro, "Fundamental Issues in Natural Resource Damage Assessment" (1988), 28 Nat. Resources J. 815, at 834.

[9] *Ibid.*, at 834-35.

[10] Cross, *supra*, note 1, at 270 and 272.

[11] *Commonwealth of Puerto Rico v. S.S. Zoe Colocotroni*, 628 F. 2d 652, at 674, 456 F. Supp. 1327 (1st Cir. 1980), cert. denied, 450 U.S. 912 (1981).

> In recent times, mankind has become increasingly aware that the planet's resources are finite and that portions of the land and sea which at first glance seem useless, like salt marshes, barrier reefs, and other coastal areas, often contribute in subtle but critical ways to an environment capable of supporting both human life and the other forms of life on which we all depend.

In this chapter, the Commission will describe the methods considered to be reliable by economists and lawyers to assess damages for harm caused to the environment. Both the advantages and disadvantages of employing a particular methodology will be presented. There appears to be a consensus among economists that although certain methodologies ought to be employed in the vast majority of cases, there is no single formula that, in every situation, will accurately measure the damages in respect of environmental assets.[12] It is the view of the Commission that the courts ought to be fully informed of the major techniques considered to be reliable to evaluate environmental harm. As Anderson and Bishop have stated, the determination of the appropriate methodology ought to be made on a case-by-case basis because the assumptions of each methodology may apply only in particular situations.[13]

2. WHICH VALUE CHARACTERISTICS OF A NATURAL RESOURCE ARE COMPENSABLE?

A fundamental issue that must be addressed prior to a discussion of the various techniques that may be used to assess environmental damages is which value characteristics are compensable. Natural resources are generally divided into use value and non-use or intrinsic value.[14] Non-use or intrinsic value is in turn subdivided into option value, existence value, and bequest value.[15]

Use value recognizes that natural resources have value to people only where the resources are utilized for practical human ends, such as fishing,

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[12] Yang, "Natural Resource Economics for CERCLA Lawyers" (1984), 14 E.L.R. 10311, at 10317; Cross, *supra*, note 1, at 297; and Newlon, *supra*, note 6, at 226.

[13] *Supra*, note 7, at 129. See, also, Freeman, "Comment 1", in Bromley, *supra*, note 7, 139, at 147.

[14] Woodard and Hope, "Natural Resource Damage Litigation under the Comprehensive Environmental Response Compensation and Liability Act" (unpublished paper, 1989, to be published in Harv. Envtl. L. Rev.), at 22 and 24; Kenison, Buchholz, and Mulligan, "State Actions for Natural Resource Damages: Enforcement of the Public Trust" (1987), 17 Envtl. L. Rev. 10434, at 10438; Anderson, *supra*, note 6, at 408; and Atkeson and Dower, *supra*, note 6, at 10.

[15] Fisher and Raucher, "Intrinsic Benefits of Improved Water Quality: Conceptual and Empirical Perspectives" (1984), 3 Adv. in App. Micro-Econs. 37, and Kenison, Buchholz, and Mulligan, *supra*, note 14.

wood production and irrigation.[16] Use value measures the monetary worth of the natural resources to the individuals who use them.[17] This is by contrast to intrinsic or non-use values. Essentially, intrinsic value estimates values lost, not from reduced use, but from the knowledge that the resources have been damaged or destroyed.[18]

As we have stated, there are three types of intrinsic value: option value, existence value, and bequest value. Option value is derived from the desire on the part of an individual to preserve the option to use the environmental asset even if the individual is not currently using the resource.[19] It constitutes the maximum amount a person is willing to pay for the option to use a public resource at some future date.[20] For example, although a person may never have visited Algonquin Park or the Rocky Mountains, he may want to do so some day and, consequently, may value the preservation of these sites. Moreover, people may be willing to pay to keep an unused reservoir pristine so that future use can be ascertained at a later date.[21] Thus, retaining the option of a future use of a particular natural resource has economic importance to members of the public.[22] It is interesting to note that the notion of option value is a concept commonly used with respect to private goods. In well-established private markets, as, for example, the market for agricultural commodities, traders will frequently pay a significant sum of money for an option on the right to use a product.[23]

Existence value is the notion that the mere existence of an environmental asset has value to non-users.[24] It is the amount that an individual

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[16] Cross, *supra*, note 1, at 281.

[17] *Ibid.*

[18] Kenison, Buchholz, and Mulligan, *supra*, note 14.

[19] Anderson, *supra*, note 6, at 408, *n.* 5. See Schulze, "Use of Direct Methods for Valuing Natural Resource Damages" (paper prepared for Resources for the Future Conference, Washington, D.C., June 16-17, 1988), at 1-2.

[20] Grigalunas and Opaluch, "Assessing Liability for Damages under CERCLA: A New Approach for Providing Incentives for Pollution Avoidance?" (1988), 28 Nat. Resources J. 509, at 517; Fisher and Raucher, *supra*, note 15, at 39; Halter and Thomas, *supra*, note 3, at 20; and Mattson and DeFoor, "Natural Resource Damages: Restitution as a Mechanism to Slow Destruction of Florida's Natural Resources" (1985), 1 J. Land Use and Envtl. L. 295, at 304.

[21] Johnson, *supra*, note 6, at 6.

[22] Cross, *supra*, note 1, at 285.

[23] *Ibid.*, at 286.

[24] *Ibid.*, at 281; Kenison, Buchholz, and Mulligan, *supra*, note 14, at 10438; Anderson, *supra*, note 6, at 508, *n.* 5; and Mattson, *supra*, note 20, at 304.

is willing to pay for the knowledge that a specific resource exists, irrespective of that person's present or anticipated use of it.[25] For example, individuals may be willing to pay for the knowledge that a particular lake is clean, either because they obtain satisfaction from knowing that it is available to others, that it is fostering the perpetuation of a threatened species, or that ecological diversity is being preserved.[26]

The final sub-category of intrinsic value is bequest value. Bequest value is willingness to pay for the satisfaction associated with endowing succeeding generations with the environmental asset.[27] For example, even though an individual has no intention of ever visiting the Cabot Trail in Cape Breton or of camping in the Northwest Territories, this person may desire that her descendants have the opportunity to enjoy these resources.

Several reasons have been advanced for employing use value rather than intrinsic value in assessing the monetary worth of environmental resources. First, it is stated that use value for public commodities generally approximates the market value for private commodities, which is the standard measure of damages in our legal system.[28] Using the same measure of damages, it is argued, results in consistency in the assessment of the value of private and public resources. Second, it is argued that the historical reliance on use value stems from the fact that use value is more exact and less speculative than intrinsic value. Use value measures actual behaviour, a more precise means of assessing damages than attitudes.[29] As economists bluntly state, use value isolates the degree to which people "put their money where their mouth is".[30] Another reason articulated for employing use value is that some publicly held goods, such as fish and trees, have an established value in the private market.[31]

Much of the literature in the last decade has been devoted to the disadvantages of complete reliance on use value when assessing damages for harm caused to the environment. The main criticism is that use value totally disregards the fact that environmental resources may have value beyond their use by humans.[32] It is stated that the loss of natural vistas,

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[25] Grigalunas and Opaluch, *supra*, note 20, at 517; Fisher and Raucher, *supra*, note 15, at 43; and Anderson and Bishop, *supra*, note 7, at 125.

[26] Fisher and Raucher, *supra*, note 15, at 43.

[27] *Ibid.*, and Cross, *supra*, note 1, at 286.

[28] Cross, *ibid.*, at 281.

[29] *Ibid.*, at 282.

[30] *Ibid.*, at 281-82.

[31] *Ibid.*, at 281.

[32] *Ibid.*, at 284.

endangered species habitats and, indeed, entire stable ecosystems, is threatened in circumstances in which the courts refuse to take into account intrinsic values in measuring environmental harm.[33] Unique resources, such as historic sites and natural wonders, will not be adequately preserved if only use value is considered in a damages assessment. Moreover, it is asserted that exclusive reliance on use value results in undercompensation for environmental damage.[34] For instance, in heavily populated communities where ground water is in full use, the value of such a resource will generally be higher than in areas in which only a small number of people are using that resource. Therefore, an individual or company that pollutes the ground water of the less populated forest preserve will be liable for significantly less damages than the polluter of the ground water of an urban community.[35]

In the United States, an important legal battle was recently resolved by the United States Court of Appeals for the District of Columbia on the assessment of damages in respect of injury to natural resources.[36] A lawsuit was launched by ten states and a number of environmental organizations challenging the regulations promulgated by the United States Department of the Interior (D.O.I.) pursuant to the Comprehensive Environmental Response, Compensation and Liability Act[37] (CERCLA), commonly known as the "Superfund". The D.O.I. regulations construe damage to natural resources primarily in terms of use value, which the petitioners argued is contrary to CERCLA's language and statutory history.[38] The petitioners stated that compensating solely for the lost uses of a natural resource is not appropriate for several reasons. It was argued that Congress intended that the country's scarce resources be conserved irrespective of their use value. Precious natural resources ought to be preserved for posterity.[39] It was also asserted that strict adherence to use value results in an underestimation of natural resources damages and encourages degradation of the environment, particularly that of the more pristine, unpopulated ecosystems. The petitioners argued that any damages assessment by the courts must involve a calculation of the lost intrinsic value of the natural resources.[40]

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[33] Atkeson and Dower, *supra*, note 6, at 40.

[34] Cross, *supra*, note 1, at 325, and Dower and Scodari, *supra*, note 4, at 167.

[35] Johnson, *supra*, note 6, at 5.

[36] *State of Ohio v. U.S. Department of Interior*, 880 F. 2d 432 (D.C. Cir. 1989).

[37] 42 U.S.C. §§9601-9675 (1980), as am. by The Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986).

[38] Petitioners' Brief, April 25, 1988, at 2.

[39] *Ibid.*, at 29 and 31.

[40] *Ibid.*, at 2, 12, 17 and 64.

The United States Court of Appeals accepted the arguments of the petitioners. The court held that, by limiting the recovery of natural damages to use value, the D.O.I. disregarded the legislative history of CERCLA as well as the language of the statute.[41] CERCLA explicitly requires the D.O.I. to "take into consideration factors including, *but not limited to* . . . use value".[42] The court stated that option and existence values are important and should be included in a natural resource damages assessment.[43] The court ordered the D.O.I. to redraft new regulations as expeditiously as possible in conformity with the judgment.[44]

It is important to note that many economists, environmental lawyers, and spokespersons for environmental organizations are of the firm belief that intrinsic value is a fundamental category of environmental damages. It is strenuously argued that it is incumbent on each citizen to consider the consequences one's acts will have for persons in the future and to come to the realization that the ability to bequeath natural resources to future generations has significant monetary value.[45]

It is evident that intrinsic value is considered to be worthy of protection in Canada. Social resources have been devoted to preserving wilderness areas and endangered species, and to creating historic and natural environmental parks. Moreover, statutes at both the provincial and federal levels recognize the worth of intrinsic value. For example, section 2 of the *Provincial Parks Act*[46] provides that each provincial park is dedicated to the people of Ontario and that "provincial parks shall be maintained for the benefit of future generations". The Act gives the Lieutenant Governor-in-Council the power to classify any provincial park as a natural environmental park, a nature reserve park, a primitive park, a wild river park or such other class of park as he may designate.[47] According to another section of the Act, the Minister of Natural Resources may take any measures that she considers appropriate for the protection of fish, animals, birds, and any property of the Crown in a provincial park.[48] In addition, a provision in the

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[41] *Supra*, note 36, at 442 and 450.

[42] 42 U.S.C. §9651(c)(2). See *State of Ohio v. U.S. Department of Interior*, *supra*, note 36, at 464.

[43] *Ibid.*

[44] *Ibid.*, at 481.

[45] Johnson, *supra*, note 6, at 10; Kenison, Buchholz, and Mulligan, *supra*, note 14, at 10438; Yang, *supra*, note 12, at 10313; Atkeson and Dower, *supra*, note 6, at 10 and 40; and Petitioners' Brief, *supra*, note 38, at 35, 42 and 54. See, also, Carpenter, "Ecology in Court, and Other Disappointments of Environmental Science and Environmental Law" (1983), 15 Nat. Resources Law. 573.

[46] *Supra*, note 5.

[47] *Ibid.*, s. 5.

[48] *Ibid.*, s. 19.

Endangered Species Act[49] enables the Lieutenant Governor-in-Council to make regulations to prevent the extinction of any species of fauna or flora by over-exploitation, the use of chemicals or any other factors considered relevant. It is prohibited to destroy, take or interfere with such designated endangered species.[50] Similarly, section 8 of the *Canada Wildlife Act*[51] provides that the Minister of the Environment, in conjunction with the provincial governments, may take measures for the protection of any species of wildlife in danger of extinction. Finally, the *Conservation Land Act*[52] gives the Minister of Natural Resources the power to "establish programs to recognize, encourage and support the stewardship of conservation land".

The essential reason put forth by those who subscribe to the view that intrinsic value should not be considered by the court in its measurement of damages is that intrinsic value is difficult to quantify. This is attributed to the fact that, unlike use value, intrinsic value is demonstrated attitudinally and not behaviourly.[53] This, however, is refuted by a substantial proportion of those practising in the environmental field, who argue that economists have developed reliable methodologies with which to measure intrinsic value, such as the contingent valuation method (discussed in the next section). In addition, it is stated that the mere fact that intrinsic value is more difficult to measure than use value is not a sufficient reason to discount it entirely in assessing environmental harm. An analogy is made with respect to the quantification of damages in personal injury cases.[54] The courts have held that compensation may be awarded not only for direct economic loss, such as lost income and medical expenses, but also for non-pecuniary damage, for example, pain and suffering, loss of consortium, and mental anguish.[55] Therefore, non-pecuniary damages in personal injury cases are awarded by the courts even though this category of damages is more difficult to assess than pecuniary loss.

It is fundamental to note that the Commission does not consider damages assessment based on use value and damages assessment based on intrinsic value to be mutually exclusive. The position of the Commission is

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[49] *Supra*, note 5, s. 3.

[50] *Ibid.*, s. 5.

[51] R.S.C. 1985, c. W-9.

[52] S.O. 1988, c. 41, s. 2.

[53] Cross, *supra*, note 1, at 289.

[54] Dower and Scodari, *supra*, note 4, at 168.

[55] *Andrews v. Grand and Toy Alberta Ltd.*, [1978] 2 S.C.R. 229, 83 D.L.R. (3d) 452; *Thornton v. Board of School Trustees of School District No. 57 (Prince George)*, [1978] 2 S.C.R. 267, 83 D.L.R. (3d) 480; and *Arnold v. Teno*, [1978] 2 S.C.R. 287, 83 D.L.R. (3d) 609. See, also, Cooper-Stephenson and Saunders, *Personal Injury Damages In Canada* (1981), ch. 7, and Ontario Law Reform Commission, *Report on Compensation for Personal Injuries and Death* (1987).

that both use value and intrinsic value of resources ought to be considered by the courts when it is assessing environmental damages, since it is the sum of these two values that represents the complete worth of an environmental resource.[56] The extent to which the various methodologies measure the intrinsic and use values of an environmental resource will be discussed in the following section.

3. METHODOLOGIES EMPLOYED TO ASSESS DAMAGES FOR HARM CAUSED TO ENVIRONMENTAL RESOURCES

The intention of this section is to describe the methodologies that can be utilized by a court to measure the monetary value of damage to the environment. Both the positive and negative features of each valuation approach will be discussed. In addition, the circumstances for which the particular technique is well-suited will be described. At the outset, we wish to state our general view that a rebuttable presumption ought to exist in favour of restoration cost, replacement cost, and contingent valuation. Market valuation, the hedonic price method and travel cost valuation ought to be employed only in the narrowly circumscribed situations that will be discussed in this section.

(a) Market Valuation

Market valuation, the traditional standard used to assess damages for harm caused to private goods,[57] has been advanced as a technique that ought to be employed by the courts in measuring damages for injury to the environment.[58] Market valuation uses the existing free market to determine the value of a resource. This approach is based on the premise that "market transactions demonstrate human value preferences through revealed behaviour"[59] and that damage to environmental resources can be equated with ordinary economic loss suffered by private parties in the marketplace. The measure of damages is the difference in the commercial or market value of property before and after the event causing the harm, referred to as the diminution in value rule.[60] When the production of goods or services is harmed, lost profits are the market measure of damages.[61] Under the

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[56] Cross, *supra*, note 1, at 297.

[57] O'Hagan, "Remedies", in Rainaldi (ed.), *Remedies in Tort* (1989), Vol. 4, §§134-37, and McCormick, *Handbook on the Law of Damages* (1935), at 165.

[58] Cross, *supra*, note 1, at 302-03.

[59] *Ibid.*, at 302.

[60] O'Hagan, *supra*, note 57, and Woodard and Hope, *supra*, note 14, at 16. See, also, *Montreal Trust Co. v. Hercules Sales Ltd. et al.*, [1969] 1 O.R. 661, 3 D.L.R. (3d) 504 (C.A.).

[61] Cross, *supra*, note 1, at 302.

market price method, there is an assumption that markets exist and that they are reasonably competitive.[62] Industry is a strong advocate of the use of market value in calculating damages in respect of environmental harm.[63]

Several reasons have been articulated for using market valuation to assess environmental damages. First, it is stated that under the market valuation approach, damages can more easily be quantified than under the other methodologies.[64] Second, it is asserted that market valuation accurately measures the worth of goods because it is behaviourly based.[65] This is by contrast to the contingent valuation technique, which measures attitudes rather than actual behaviour.[66] Another purported advantage of the market valuation procedure is that it fosters consistency respecting the valuation of private and public goods.[67]

A significant number of articles written in the United States have attacked the use of the market valuation approach to quantify damages for injury to natural resources.[68] It is argued that this approach should be rejected because there is no market for the vast majority of natural resources.[69] The market price method is premised on reasonable competition, that is, it assumes that a large number of sellers and buyers exists in the natural resources market.[70] However, as previously mentioned, natural resources, unlike privately owned goods, are generally not traded in the marketplace.[71] Moreover, natural resources are often unique or scarce and not reproduceable. The vast proportion of natural resources are "open-access", which means that the resource is open to members of the public either for free or for a nominal charge.[72] As one economist has stated, there are two basic reasons why open-access natural resources are different from private goods. "First, no one can claim ownership, exclude others from their use

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[62] Kenison, Buchholz, and Mulligan, *supra*, note 14, at 10438.

[63] Cross, *supra*, note 1, at 302.

[64] *Ibid.*, at 303.

[65] *Ibid.*

[66] In contingent valuation, economists measure damages by asking individuals a series of questions in order to identify the value members of the public place on environmental goods. This methodology is discussed *infra*, this ch., sec. 3(c).

[67] Cross, *supra*, note 1, at 304.

[68] Atkeson and Dower, *supra*, note 6, at 10; Cross, *supra*, note 1, at 305-08; and Dower and Scodari, *supra*, note 4, at 167-68.

[69] Atkeson and Dower, *supra*, note 6, at 10, and Cross, *supra*, note 1, at 306 and 308.

[70] Kenison, Buchholz, and Mulligan, *supra*, note 14, at 10438.

[71] *Ibid.*; Atkeson and Dower, *supra*, note 6, at 10; Cross, *supra*, note 1, at 305-08; and Dower and Scodari, *supra*, note 4, at 167-68.

[72] Yang, *supra*, note 12, at 10312, and Newlon, *supra*, note 6, at 204 and 206.

or charge for that use".[73] Second, the users of the natural resource "cannot trade their share of uses among each other".[74] Examples of open-access resources include non-commercial species of fish and wildlife, habitats, ecosystems, and resources that are used for aesthetic and recreational purposes.[75]

Although most economists concede that the market valuation approach has little utility for goods that are completely open-access, it is acknowledged that this technique may have some value with respect to those resources that have both open-access and market value characteristics.[76] These environmental goods, it is asserted, can be valued at least partially by market based methods. Newlon offers the example of a commercial fishery.[77] Commercial fishermen sell their fish on the open market, which can be used to measure the value of their catch. However, this market price will reflect only the fisherman's investment in boats, gear and time since the fisherman may not pay for the right to catch the fish or control the basic factors fundamental to fish production. These aspects of the resource are owned by members of the public as open-access resources. Because the value of these characteristics of the resource is not captured in the price of fish, the injury to the fishery will not be completely compensated for by paying lost profits to the fishermen.[78]

Many writers in the environmental field state that the market price, even if it existed, cannot be considered an adequate proxy for the true economic value of an environmental resource.[79] Adherence to the market value technique, it is argued, seriously undervalues the true worth of the environmental resource, results in a low assessment of damages, and leaves injuries largely uncompensated.[80] A fundamental weakness of the market valuation approach is that it fails to take into account intrinsic value. For example, natural resources, such as wetlands, often provide non-market goods and services to society, the value of which are not fully captured in the market price of land. Although wetlands do not generally provide much direct use value to an owner, it is very valuable to the public in terms of habitat breeding grounds, flood retention, and aesthetic pleasure. People who do not use the wetlands may be willing to pay an amount of money to

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[73] Yang, *supra*, note 12, at 10312.

[74] *Ibid.*

[75] Newlon, *supra*, note 6, at 206.

[76] *Ibid.*, at 205.

[77] *Ibid.*

[78] *Ibid.*

[79] Atkeson and Dower, *supra*, note 6, at 40.

[80] *Ibid.*, at 10 and 40; Carlson, *supra*, note 6, at 10302; Cross, *supra*, note 1, at 307; and Dower and Scodari, *supra*, note 4, at 167.

preserve the right to use these resources in the future or solely for the knowledge that the wetlands will continue to exist. However, the market price for the wetlands will generally not reflect these values.[81] As one American author stated, the "value of the famous Lone Cypress of Monterey Peninsula cannot be reduced to its price as lumber".[82] One must ask to what extent should market value be applied to unique resources, such as endangered species, historic sites, and natural wonders. Should the value of Algonquin Park or the Rocky Mountains be calculated by the price per acre at which neighbouring private land would sell?

It is fundamental to note that the common law does not use market value as the exclusive measure of damages when assessing the worth of either private or public goods. As one writer has observed:[83]

> It is, indeed, not difficult to imagine situations where putative market prices afford no convincing guide to what the plaintiff has really lost. Sometimes, there *is* no 'market' for such items, against which to gauge their value 'before and after'; or the current conditions of the marketplace are so artificially distorted by events that they afford no just yardstick of value. In such cases, Courts have shifted for themselves as best they may, guided only by the vague overall goal of *restitutio in integrum*, unassisted by any handy tool for precise calculation.

For example, in *Corporation of the Borough of Scarborough v. R.E.F. Homes Ltd.*,[84] the municipality instituted action against the respondent company for the loss of three maple trees on a road allowance in the borough. The trees had been cut down inadvertently by the respondent company, which was in the business of constructing homes. The Ontario Court of Appeal held that the traditional method for measuring damages, diminution in value, was not an appropriate procedure for assessing the damage.[85] Lacourcière J.A. listed several reasons for the court's refusal to use market valuation. First, he stated that a road allowance is not generally marketable land. Second, he emphasized that this methodology fails to take into account the intrinsic value of the property that has been destroyed. Finally, the court emphasized that the compensation formula for a municipality should be different from that applicable to private owners.[86] Lacourcière J.A. stated:[87]

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[81] Dower and Scodari, *ibid.*, and Atkeson and Dower, *supra*, note 6, at 10.

[82] Cross, *supra*, note 1, at 308.

[83] Irvine, *supra*, note 6, at 138 (emphasis added).

[84] (1979), 9 M.P.L.R. 255 (Ont. C.A.).

[85] *Ibid.*, at 257.

[86] *Ibid.*

[87] *Ibid.*

> In our judgment, the municipality is, in a broad general sense, a trustee of the environment for the benefit of the residents in the area of the road allowance and, indeed, for the citizens of the community at large. While the diminution in value of a road allowance stands on a different footing than that of a private land deprived of ornamental or shade trees, it is nevertheless a real and substantial loss. The appellant borough, as a responsible local government, spent a great deal of money in nurturing these trees to maturity, pruning and taking care of them over the years. No doubt, the restoration process will be long and costly. In the meantime, the road allowance has been reduced in monetary as well as aesthetic value. Although the evaluation method is said to be intended for use in evaluating trees in landscape designs as well as street planting, the criteria in the formula for the compensation of private owners suffering loss of trees cannot be adopted in this case because the loss to a municipality is quite different. The diminution in value of a road allowance, which normally is not marketable land, must necessarily differ from that of privately owned, landscaped property, even if the trees on both properties are intrinsically similar. No such distinction is made by the horticultural experts who prepared the formula, or by the experts at trial whose opinion was based on it. No argument was addressed to us as to how one assesses damages for the loss to a municipality of the intrinsic or environmental value of trees which have been destroyed; therefore consideration of the compensability or calculation of that element of damage must be left to be determined in an appropriate case.

The Ontario Court of Appeal assessed damages at $4,000 without offering an explanation of how it arrived at this figure.[88]

The 1982 Ontario decision *Chappell v. Barati*[89] is a further illustration of the rejection of the market valuation approach to assess damages. This case involved an action by the plaintiffs for damages for the negligent destruction of 33,800 trees on their property. The trees had been destroyed by a fire started by the defendant on the defendant's adjoining land. The defendant admitted liability and, therefore, the essential issue before the Ontario High Court was the quantum of damages to which the plaintiffs were entitled.[90]

In *Chappell v. Barati*, the plaintiffs had planted the trees solely for aesthetic reasons and not for any investment purpose. That is, the plaintiffs had no intention of selling the land or of growing the trees for the purpose of selling them at a later date.[91] After examining the evidence, Osborne J. concluded that the fire had not lessened the market value of the land. However, the court reasoned that simply because there was no diminution in land value did not imply that there was no compensable damage.[92]

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[88] *Ibid.*

[89] (1982), 30 C.C.L.T. 137 (Ont. H.C.J.).

[90] *Ibid.*, at 142.

[91] *Ibid.*, at 142 and 144.

[92] *Ibid.*, at 147.

Mr. Justice Osborne, in his rejection of the market valuation approach, cited with approval *Corporation of the Borough of Scarborough v. R.E.F. Homes Ltd.*[93] Like Lacourcière J.A., he used a vague and undefined "common-sense approach" to arrive at a $7,500 assessment of the damages sustained to the plaintiffs' trees.[94]

In *State of Ohio v. U.S. Department of the Interior*,[95] the United States Court of Appeals held that the heavy reliance on market valuation in the D.O.I. regulations is contrary to CERCLA. Wald J. stated that CERCLA explicitly provides that compensation for injuries to natural resources caused by hazardous substance spills is not limited to market value.[96] In addition, the court stated that it is evident from the CERCLA congressional hearings that the provisions respecting natural resource damages are to measure society's *full* loss as a result of the damage or destruction of a natural resource, not simply the loss in terms of market valuation.[97] Many articles in the United States have criticized the regulations promulgated by the Executive and have concluded that the traditional common law damages rule underestimates the harm caused to the environment and is clearly contrary to CERCLA. Johnson has made the following observations:[98]

> The regulations are seriously flawed. Their underlying premise is that damage to natural resources can be equated with ordinary economic loss suffered by private parties in the marketplace. However, our ground water, land, rivers, and air are not fungible commodities easily replaceable in the open market. In most situations, they are limited, unique resources whose public value for this and future generations far surpasses the value that the regulations are likely to place on them. . . . The regulations, unfortunately, assume that the marketplace can and usually does set a value on our natural resources that is reflective of their true value. This often is not the case.

Likewise, in the landmark case of *Commonwealth of Puerto Rico v. S.S. Zoe Colocotroni*, the United States Court of Appeals, First Circuit, stated in unequivocal terms that the diminution in value rule, which governs damage to private property, should not limit recovery for injury to public resources.[99] In this case, a Panamanian oil tanker carrying crude oil from Venezuela to Puerto Rico ran aground on a reef a few miles south of Puerto Rico. The captain ordered 1.5 million gallons of crude oil dumped into the

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[93] See Irvine, *supra*, note 6, at 139.

[94] *Supra*, note 89, at 148.

[95] *Supra*, note 36, at 438, 441-42, and 462-63. For a discussion of this case, see text accompanying notes 36-44, *supra*.

[96] *Supra*, note 36, at 444-48.

[97] *Ibid.*, at 450-54.

[98] *Supra*, note 6, at 4.

[99] *Supra*, note 11, at 673.

sea in order to lighten the ship. It came ashore, penetrating beaches and mangrove forests and destroying over 92 million organisms.[100] The United States and the Commonwealth of Puerto Rico brought suit to recover damages for this environmental harm. The damages provision in the pertinent Puerto Rican statute provided that "the total value of the damages caused to the environment and/or natural resources" could be recovered.[101] The court offered the following reasons for its rejection of the market valuation approach to assess damages in this case:[102]

> Many unspoiled natural areas of considerable ecological value have little or no commercial or market value. Indeed, to the extent such areas have a commercial value, it is logical to assume they will not long remain unspoiled, absent some governmental or philanthropic protection. A strict application of the diminution in value rule would deny the state any right to recover meaningful damages for harm to such areas, and would frustrate appropriate measures to restore or rehabilitate the environment.
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> . . . .
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> No market exists in which Puerto Rico can readily replace what it has lost. The loss is not only to certain plant and animal life but, perhaps more importantly, to the capacity of the now polluted segments of the environment to regenerate and sustain such life for some time into the future. That the Commonwealth did not intend, and perhaps was unable, to exploit these life forms, and the coastal areas which supported them, for commercial purposes should not prevent a damages remedy in the face of the clearly stated legislative intent to compensate for 'the total value of the damages caused to the environment and/or natural resources'.

It is clear from the discussion in this section that many academics as well as judges in Canada and the United States are of the view that the market valuation approach is often not the appropriate method with which to assess damages for harm caused to the environment. What must be explored, therefore, are the alternative approaches to making such an assessment.

(b) Restoration and Replacement Cost

(i) Restoration Cost

Restoration cost is widely endorsed as an excellent method with which to calculate damages for injury to the environment.[103] Essentially, the restoration cost approach measures damages as the cost of restoring the environment to its pre-contaminated state. In other words, it is the cost to

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[100] *Ibid.*, at 657 and 662.

[101] 12 L.P.R.A. §1131(29).

[102] *Supra*, note 11, at 673-74.

[103] Breen, "CERCLA'S Natural Resource Damage Provisions: What do we know so far?" (1984), 14 E.L.R. 10304; Anderson, *supra*, note 6, at 445; Cross, *supra*, note 1, at 273

restore the environment through rehabilitation of the polluted area regardless of the size of the economic impact.[104] It is fundamental to observe that both lost use and intrinsic values are restored to the degree that restoration is successful.[105] It is also noteworthy that restoration cost will generally result in a much higher damage award than market valuation.[106]

Many writers in the field of environmental law argue that restoration cost should provide the presumptive measure of damages for harm caused to the environment.[107] It is asserted that, by contrast to the other methodologies, restoration cost best ensures that the environment is preserved.[108] This is attributed to the fact that this approach restores both use and non-use values to the fullest extent possible.[109] Commentators widely acknowledge that unlike the market valuation approach, restoration cost does not result in an undercompensation with respect to the environmental harm.[110] Moreover, it is stated that it is not difficult to quantify damages under the restoration cost approach. For example, estimators can calculate the cost of dredging contaminated soil and of reintroducing plant and animal life. Comparisons can be made between the biological elements of the resource, its scenic value, and the services it offered prior to the injury, on the one hand, and the same characteristics of the restored resource, on the other hand.[111]

Restoration of a damaged environmental site is not a concept that is foreign to the field of Canadian environmental law. Part IX of the Ontario *Environmental Protection Act* (referred to as the "Spills Bill") provides that owners of pollutants and persons having control of a pollutant that is spilled have a duty to restore the natural environment to its pre-injury state.[112] In

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and 298; and Yang, Dower, and Menefee, *The Use of Economic Analysis in Valuing Natural Resource Damages* (1984), at 46.

104 Breen, *supra*, note 103, at 10307; Yang, *supra*, note 12, at 10314; Anderson, *supra*, note 6, at 443; and Newlon, *supra*, note 6, at 216-17.

105 Anderson, *supra*, note 6, at 408.

106 Breen, *supra*, note 103, at 10307, and Newlon, *supra*, note 6, at 216-17.

107 Cross, *supra*, note 1, at 273, and Breen, *supra*, note 103, at 10304.

108 Cross, *supra*, note 1, at 327.

109 Anderson, *supra*, note 6, at 445-46.

110 Cross, *supra*, note 1, at 273, and Breen, *supra*, note 103, at 10304.

111 Anderson, *supra*, note 6, at 445.

112 *Environmental Protection Act*, *supra*, note 5, s. 81, as am. by S.O. 1988, c. 54, s. 30. Section 79(1)(i) defines "restore the natural environment" as follows:

> (i) 'restore the natural environment', when used with reference to a spill of a pollutant, means restore all forms of life, physical conditions, the natural environment and things existing immediately before the spill of the pollutant that are affected or that may reasonably be expected to be

addition, pursuant to section 85, the Ministry of the Environment may order designated individuals and public entities to restore a site.[113] Furthermore, the *Environmental Protection Act*,[114] the *Ontario Water Resources Act*,[115] and the *Pesticides Act*[116] provide that a court that convicts a person of an offence pursuant to these statutes, may order the accused to restore the natural environment.

It is also noteworthy that in assessing common law damages to private property, the courts have occasionally rejected the market valuation approach and have instead selected the restoration cost method as the appropriate technique with which to measure harm. For example, in *Jens v. Mannix Co. Ltd.*[117] the plaintiffs sought compensation for damage to their house, its contents, the garage, and surrounding land, which had been saturated with crude oil caused by a leak in the defendant's pipeline. The house was rendered uninhabitable. The defendant argued that because the land was zoned for commercial use, the market value of the property had not been lessened by the oil leak.[118] The British Columbia Supreme Court rejected the diminution in value rule and held that the plaintiffs were entitled to the restoration cost of the house, garage, trees, and turf.[119] Similarly, in *Horne v. New Glasgow*[120] the Nova Scotia Supreme Court held that the cost of restoration rather than diminution in value was the proper measure of damages. Finally, in *Canadian National Railway Co. v. Canada Steamship Lines Ltd.*[121] the Ontario High Court stated that market price, the general method of measuring damage in respect of harm to property, should not be employed in cases in which the property is unusual in character, as for example, where no market exists for the property being assessed.[122]

> affected by the pollutant, and 'restoration of the natural environment', when used with reference to a spill of a pollutant, has a corresponding meaning; . . .

For a discussion of statutory remedies for environmental harm, see, generally, *supra*, ch. 2, sec. 3(b).

[113] *Supra*, note 5, s. 85, as am. by S.O. 1988, c. 54, s. 33.

[114] *Ibid.*, s. 146d(1), as en. by S.O. 1986, c. 68, s. 15.

[115] *Supra*, note 5, s. 71(1), as en. by S.O. 1986, c. 68, s. 41, as am. by S.O. 1988, c. 54, s. 88(b).

[116] *Supra*, note 5, s. 34d(1), as en. by S.O. 1986, c. 68, s. 47.

[117] (1978), 89 D.L.R. (3d) 351, [1978] 5 W.W.R. 486 (B.C.S.C.) (subsequent references are to 89 D.L.R. (3d)).

[118] *Ibid.*, at 352.

[119] *Ibid.*, at 358-59.

[120] [1954] 1 D.L.R. 832 (N.S.S.C.).

[121] [1949] O.W.N. 583 (H.C.J.).

[122] *Ibid.*, at 586.

The most serious objection to the restoration approach is the tremendous expenditure that this procedure often entails.[123] Newlon has argued that, where the expense of restoring a natural resource is greater than the aggregate value of all the services that society obtains from the resource, the imposition of restoration costs on a defendant constitutes a misappropriation of social resources.[124] In other words, circumstances do exist where the decision to execute a technically feasible restoration plan is unreasonable in terms of the total social costs and benefits.[125] There is acknowledgment even among environmentalists that restoration is sometimes either too costly or ineffective to serve as a remedy for injuries done to the environment.[126] Thus, many assert that the restoration cost approach is appropriate solely in situations in which the expenditures are reasonable.[127] In fact, the *Environmental Protection Act*[128] specifically provides that a person is obliged only to do everything "practicable" to restore the environment. "Practicable" is defined in section 79 of the Act:[129]

> 79.—(1)(g) 'practicable' means capable of being effected or accomplished.
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> . . . .
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> (3) In determining what is practicable for the purposes of this Part, regard shall be had to the technical, physical and financial resources that are or can reasonably be made available.

The contingent valuation approach, which will be discussed below, has been widely suggested as the methodology that ought to be employed to assess the reasonableness of restoration costs in any given context.[130]

In the United States, the Court of Appeals for the District of Columbia Circuit in *State of Ohio v. U.S. Department of the Interior*[131] dealt with the issue of natural resource damages assessment. In that case, the D.O.I. had promulgated a rule that limited recovery of damages to the lesser of

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[123] Cross, *supra*, note 1, at 300.

[124] Newlon, *supra*, note 6, at 220.

[125] *Ibid.*; Cross, *supra*, note 1, at 300; Yang, Dower, and Menefee, *supra*, note 103, at 47 and 116; and Anderson, *supra*, note 6, at 452.

[126] Cross, *supra*, note 1, at 300-01.

[127] Breen, *supra*, note 103, at 10310; Cross, *supra*, note 1, at 273; and Newlon, *supra*, note 6, at 220.

[128] *Supra*, note 5.

[129] *Ibid.*

[130] Cross, *supra*, note 1, at 335. See text accompanying note 175, *infra*.

[131] *Supra*, note 36.

(a) restoration or replacement costs or (b) diminution of use values.[132] However, CERCLA provides that damages recovered are "for use only to restore, replace or acquire the equivalent of such natural resources" and that "[t]he measure of damages in any action . . . shall not be limited by the sums which can be used to restore or replace such resources".[133] The court stated that the D.O.I. rule was clearly contrary to the intent of the Congress.[134] The court held that it is evident from an examination of CERCLA, particularly the provision quoted above, that Congress intended restoration costs to be the presumptive standard for natural resource damages.[135] According to Wald J., speaking for the majority, restoration costs are to be ordered in situations in which restoration is feasible and can be performed at a reasonable cost.[136] The court stated that the almost exclusive focus on market values in the D.O.I. regulations is inappropriate to assess damages in the environmental context and is in breach of CERCLA:[137]

> While it is not irrational to look to market price as *one* factor in determining the use value of a resource, it is unreasonable to view market price as the *exclusive* factor, or even the predominant one. From the bald eagle to the blue whale and snail darter, natural resources have values that are not fully captured by the market system.

In *Commonwealth of Puerto Rico v. S.S. Zoe Colocotroni*,[138] the restoration cost approach was also endorsed as the appropriate method with which to quantify damages for the destruction of the beaches, mangrove forests, and the millions of organisms killed as a result of the oil spill. As Mattson and DeFoor stated, the Court of Appeal "axed the diminution theory without pause" and held that the restoration cost approach would most accurately reflect the harm done to the environment in this case.[139] Campbell C.J. emphasized that solely reasonable expenditures would be ordered by the court:[140]

> [W]e think the appropriate primary standard for determining damages in a case such as this is the cost reasonably to be incurred . . . to restore or rehabilitate the environment in the affected area to its pre-existing condition, or as close thereto as is feasible without grossly disproportionate expenditures.

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[132] 43 C.F.R. §11.35(5)(2) (1987).

[133] 42 U.S.C. §9607(f)(1).

[134] *Supra*, note 36, at 438, 441-42, and 444.

[135] *Ibid.*, at 444, 446, and 452.

[136] *Ibid.*, at 446.

[137] *Ibid.*, at 462-63 (emphasis in original).

[138] *Supra*, note 11.

[139] Mattson and DeFoor, *supra*, note 20, at 299.

[140] *Supra*, note 11, at 675.

> The focus in determining such a remedy should be on the steps a reasonable and prudent sovereign or agency would take to mitigate the harm done by the pollution, with attention to such factors as technical feasibility, harmful side effects, compatibility with or duplication of such regeneration as is naturally to be expected, and the extent to which efforts beyond a certain point would become either redundant or disproportionately expensive. Admittedly, such a remedy cannot be calculated with the degree of certainty usually possible when the issue is, for example, damages on a commercial contract. On the other hand, a district court can surely calculate damages under the foregoing standard with as much or more certainty and accuracy as a jury determining damages for pain and suffering or mental anguish.

(ii) Replacement Cost

Replacement cost is another method with which to assess monetary compensation for injuries to the environment. In situations in which on-site restoration either is not technically feasible or is disproportionately expensive, a court may order that damages be awarded against a polluter for the purpose of purchasing property in which the environmental values are similar to those of the pre-damaged site. The expenditure necessary to replace the lost resource with a similar one is called replacement cost.[141] This remedy was suggested by the court in the *Commonwealth of Puerto Rico* decision:[142]

> There may be circumstances where direct restoration of the affected area is either physically impossible or so disproportionately expensive that it would not be reasonable to undertake such a remedy. Some other measure of damages might be reasonable in such cases, at least where the process of natural regeneration will be too slow to ensure restoration within a reasonable period. . . . Alternatives might include acquisition of comparable lands for public parks or, as suggested by defendants below, reforestation of a similar proximate site where the presence of oil would not pose the same hazard to ultimate success. As with the remedy of restoration, the damages awarded for such alternative measures should be reasonable and not grossly disproportionate to the harm caused and the ecological values involved.

An important drawback of the replacement cost method stems from the fact that it is based on the notion that the replaced environmental site can take the place of the injured or destroyed area.[143] One can envisage many situations in which a damaged resource is unique, such as natural wonders or historical areas, and therefore cannot be replaced.

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[141] Cross, *supra*, note 1, at 301, and Zeller and Burke, "Theories of State Recovery under CERCLA for Injuries to the Environment" (1984), 24 Nat. Resources J. 1101, at 1112.

[142] *Supra*, note 11, at 675. *United States v. Board of Trustees of Florida Keys Community College*, 531 F. Supp. 267 (S.D. Fla. 1981) has been interpreted as standing for the proposition that the court may order the replacement cost method of compensation for the destruction of natural resources: see Cross, *supra*, note 1, at 301.

[143] Cross, *ibid.*, at 302.

(c) Contingent Valuation

Since its emergence in 1952,[144] a great deal of research has been devoted to perfecting the contingent valuation approach, and it is now heralded as one of the best techniques to evaluate the worth of environmental resources.[145] The contingent valuation method employs personal interviews, telephone interviews, and mail surveys to ask people what monetary value they place on non-market commodities. Individuals are directly surveyed as to their willingness to pay for a given resource contingent on the existence of a hypothetical market situation.[146] For example, a sample of people may be asked what they would be willing to pay to preserve the grizzlies in Alberta or to keep an oil slick off Cavandish Beach in Prince Edward Island. The contingent valuation method has been used by economists to value a wide range of environmental assets, including clean air, clean water, endangered species, and ecosystems.[147] In Canada, the contingent valuation approach has been employed to measure the recreational and preservational values associated with the salmon in the Fraser River, British Columbia,[148] and to study the water quality in Gibson Lake in the Parry Sound District.[149]

Why is contingent valuation considered by many in the environmental field to be the optimal technique to assess damage to the environment? Contingent valuation, like the restoration cost approach, measures both the intrinsic value and the use value of a resource and, therefore, enables a court to determine the complete economic value of an environmental asset.[150] Based on responses in surveys to hypothetical situations, the researcher is able to estimate the existence, option, and bequest values that members of the public place on Ontario's environmental resources. It is

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144 Anderson and Bishop, *supra*, note 7, at 117.

145 Dower and Scodari, *supra*, note 4, at 168; McConnell, in "Comment 2", in Bromley, *supra*, note 7, 151, at 159; Yang, Dower, and Menefee, *supra*, note 103, at 24; Cross, *supra*, note 1, at 320; Mitchell and Carson, *Using Surveys to Value Public Goods: The Contingent Valuation Method* (paper prepared for Resources for the Future Conference, Washington, D.C., June 16-17, 1988), at 105; and Duffield, "Travel Cost and Contingent Valuation: A Comparative Analysis" (1984), 3 Advs. in App. Micro-Econs. 67, at 84.

146 Anderson, *supra*, note 6, at 444; Atkeson and Dower, *supra*, note 6, at 10; Newlon, *supra*, note 6, at 214; Cross, *supra*, note 1, at 315; Cicchetti and Peck, "Assessing Natural Resource Damages: The Case Against Contingent Valuation Survey Methods" (1989), 4 Nat. Resources & Env't. 6; Mattson and DeFoor, *supra*, note 20, at 306; Anderson and Bishop, *supra*, note 7, at 91; and Carson and Navarro, *supra*, note 8, at 827.

147 Yang, Dower, and Menefee, *supra*, note 103, at 56.

148 *Ibid.*, at 57-58.

149 Auld, "Valuing the Environment: The Demand for Water Quality in Recreational Use" (1989), 20 Envts. 75.

150 Carson and Navarro, *supra*, note 8, at 827 and 833; Atkeson and Dower, *supra*, note 6, at 10; Dower and Scodari, *supra*, note 4, at 168; and Fisher and Raucher, *supra*, note 15, at 47.

stated that "[t]he scope of its application is limitless",[151] in that contingent valuation can assess the value of all types of non-market goods that the other methodologies, such as market valuation, travel cost and hedonic price, are incapable of measuring. Unlike the above-mentioned techniques, contingent valuation is not constrained by data on actual transactions.[152] For example, there appears to be considerable public concern for the preservation of the blue whale. People who never intend to consume whale products or who are highly unlikely to have the opportunity to see a blue whale may nevertheless be willing to pay an amount of money for the knowledge that this species will remain extant. In this situation, there will be no property values or travel costs on which to base any measurement of such values.[153]

What are the other advantages of the contingent valuation approach? It is stated that a positive feature of this technique is its simplicity and directness in questioning members of the public on the monetary value they assign to resources. As Anderson and Bishop state, the contingent valuation approach simply asks people what values they place on environmental assets, by contrast to other methods, such as travel cost valuation and the hedonic price method, which "involve elaborate sets of assumptions and complicated econometrics to arrive at values".[154] In addition, many writers point to "the internal consistency and replicability of contingent valuation survey results".[155]

Despite the substantial support received for the contingent valuation technique, it is essential to canvass the negative aspects of this approach. Some assert that members of the public do not have adequate information to arrive at an accurate valuation. It is stated that as people have very little experience in placing monetary value on unpriced environmental resources, the survey results may be meaningless or of little utility.[156] However, others argue that it is possible in a well-designed contingent valuation study to impart enough information to respondents to allow them to make informed judgments about the value of environmental goods. According to proponents of the contingent value approach, a well-designed study ought to include a carefully worded description of the resources or the change in the environmental quality that is to be assessed. Furthermore, visual aids, such as photographs, charts, and maps, should be utilized.[157] It is believed

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[151] Yang, Dower, and Menefee, *supra*, note 103, at 56.

[152] *Ibid.*, at 117.

[153] Anderson and Bishop, *supra*, note 7, at 125.

[154] *Ibid.*, at 116.

[155] Cross, *supra*, note 1, at 317.

[156] *Ibid.*

[157] Anderson and Bishop, *supra*, note 7, at 118.

that personal interviews rather than mail surveys yield more accurate results because of the greater flexibility in the amount of information that can be transmitted by the interviewers.[158] Yet, sceptics question whether the interviewer or questionnaire designer can fully compensate for the lack of information and experience of the interviewees in the limited time and space available.[159]

A substantial amount of criticism of the contingent valuation approach stems from the fact that it is based on hypothetical transactions. The approach assumes that individuals respond to a contingent valuation survey in the same manner as they would to a marketplace transaction. Some writers are reluctant to accept the contingent valuation approach on the grounds that if you ask a hypothetical question you get a hypothetical answer; they argue that people's expressed attitudes do not accurately predict actual behaviour and that responses not based on actual behaviour are meaningless.[160] It is also argued that a bias is built into each contingent valuation study, since people are asked to express their willingness to pay while being guaranteed that the responsible parties, not the interviewees, will actually be compelled to pay to preserve the particular natural resource.[161] Others are of the view that individuals may tailor their responses in order to promote certain public policies.[162] According to empirical research, however, this type of strategic behaviour does not pervade most contingent valuation studies. In circumstances in which questionnaires are well-designed, strategic responses are generally absent.[163]

A serious dilemma confronting economists is whether willingness to pay or willingness to sell should provide the measure of value of an environmental asset.[164] Should individuals participating in a contingent valuation study be asked what they would be willing to pay for environmental restoration or should they be asked what payment they would be willing to accept to tolerate the degradation of the environment?[165]

This controversy emanates from the widely-held view that willingness to pay undervalues environmental assets and results in lower damage

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[158] Bishop, Heberlein, and Kealy, "Contingent Valuation of Environmental Assets: Comparisons with a Simulated Market" (1983), 23 Nat. Resources J. 619, at 632.

[159] Cicchetti and Peck, *supra*, note 146, at 8.

[160] Anderson and Bishop, *supra*, note 7, at 125.

[161] Cicchetti and Peck, *supra*, note 146, at 8.

[162] Cross, *supra*, note 1, at 316.

[163] *Ibid.* See, also, Yang, Dower, and Menefee, *supra*, note 103, at 62.

[164] Cross, *supra*, note 1, at 335 and 337; Yang, Dower, and Menefee, *supra*, note 103, at 30 and 59; Bishop, Heberlein, and Kealy, *supra*, note 158, at 619; and Duffield, *supra*, note 145, at 70.

[165] Carson and Navarro, *supra*, note 8, at 820.

awards than willingness to sell.[166] Professor Knetsch, who has conducted a substantial amount of empirical research into this question, has indicated that individuals consistently respond that "they would require a far larger sum to forgo their rights of use or access to a resource than they would pay to keep the same entitlement".[167] Many attribute the wide disparity between the two measures to the "income effect". Writers such as Cross argue that willingness to pay measures the income position of the respondent as much as it estimates the value of the environmental goods.[168] According to Cross, willingness to pay leads to lower damages assessment than willingness to sell because the people surveyed lack the finances to pay more. He states that the "income effect" ought not to have any impact on an environmental damages award and that, in the public forum, each individual should have a vote of equal value irrespective of his wealth.[169]

Some have argued that willingness to sell tends to place an inflated value on environmental assets and results in upwardly biased damage awards.[170] It is noteworthy that the vast majority of contingent valuation studies have not measured willingness to sell.[171] Supporters of willingness to sell assert that it is more democratic and more appropriate within the context of environmental damages than willingness to pay. It is considered to be more democratic because each person surveyed in a contingent valuation study can make an equal contribution to determining the dollar value to be attributed to a particular natural resource regardless of his income.[172] In addition, willingness to sell is stated to be a more logical measure than willingness to pay in the assessment of damages for harm to public goods. Both individuals and government seek to obtain damages in respect of resources that the public already owns; it therefore appears to be more reasonable to view these environmental resources as " 'sold' to the damaging party, rather than to require the public to 'pay' for resources that already belong to it".[173]

A compromise solution has been reached by some of those active in the field of environmental damages assessment. It is asserted that the measure of the value of the environmental asset should lie between willingness

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166 Cross, *supra*, note 1, at 335.

167 Knetsch and Sinden, "Willingness To Pay And Compensation Demanded: Experimental Evidence Of An Unexpected Disparity In Measures Of Value" (1984), 99 Q.J. Econ. 507, at 508.

168 *Supra*, note 1, at 336.

169 *Ibid.*

170 *Ibid.*, at 338, and Carson and Navarro, *supra*, note 8, at 829.

171 Anderson and Bishop, *supra*, note 7, at 117.

172 Cross, *supra*, note 1, at 336.

173 *Ibid.*

to pay and willingness to sell and that willingness to sell should be considered to be the upper limit on damages.[174] It has also been suggested that the use of an upper limit is particularly helpful in determining whether restoration costs are reasonable in any given context.[175]

In summary, it appears that a significant number of resource economists and environmental lawyers consider contingent valuation to be the most promising methodology to assess damages for injury to the environment. Mitchell and Carson have expressed the following view:[176]

> Contingent valuation shows promise as a powerful and versatile tool for measuring the economic benefits of the provision of non-marketed goods. It is potentially capable of directly measuring a broad range of economic benefits for a wide range of goods, including those not yet supplied, in a manner consistent with economic theory. Other available methods, in contrast, are capable of measuring only some of those benefits and are limited to valuing existing goods and existing quantity and quality levels, and researchers employing them must make a number of unverifiable assumptions in the course of deriving benefit estimates from the available data.

(d) Travel Cost Valuation

In response to the inadequacy of the market approach to value public goods, travel cost valuation was devised by economists to measure the worth of natural resources.[177] Travel cost valuation, a technique used to value a recreation site, first emerged in 1947 and was developed in the late 1950's and the 1960's.[178] This approach estimates the "use value of natural resources by seeking market surrogates for unpriced natural resources".[179] The basic premise underlying the travel cost method is that the cost of travelling to use an open-access resource is tantamount to the value of the natural resource. In other words, the value of the site is reflected in the expenses incurred by people to visit and use the area.[180] The expenditures made by travellers for recreation, such as transportation costs, the opportunity cost of time lost, and entrance fees,[181] are examined in order to assess the willingness of people to pay to visit a particular natural resource such

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[174] *Ibid.*, at 338.

[175] *Ibid.* See text accompanying note 130, *supra*.

[176] *Supra*, note 145, at 2.

[177] Atkeson and Dower, *supra*, note 6, at 10.

[178] Newlon, *supra*, note 6, at 214; Cross, *supra*, note 1, at 310; Anderson and Bishop, *supra*, note 7, at 92, and Yang, Dower, and Menefee, *supra*, note 103, at 50.

[179] Cross, *supra*, note 1, at 310.

[180] Newlon, *supra*, note 6, at 214.

[181] Cross, *supra*, note 1, at 310.

as Niagara Falls or the Rocky Mountains. The travel cost approach has been labelled an expenditure based method as it seeks to value a natural resource based on the amount of money spent by those using the resource in question.[182]

Since its emergence, travel cost valuation has undergone various improvements to capture more factors that influence an individual's demand for outdoor activities.[183] One of the main reasons why travel cost valuation is considered to be a reliable technique is that it is based on actual economic behaviour.[184] It is worth noting that travel cost valuation has been widely employed and is considered by most economists as a sound technique to value outdoor recreational activities.[185]

The travel cost valuation method, however, has several shortcomings. It is fundamental to observe that this technique is appropriate only in circumstances in which travel has a substantial impact on access to the environmental resource.[186] In other words, the travel cost method accords little or no value to true wilderness areas, where human visitation is extremely rare or nonexistent.[187] Moreover, this methodology has little utility in cases in which the damage is not localized.[188] Therefore, the number of environmental resources that can be valued under this approach is circumscribed.

Another major drawback of this methodology is that travel cost measures solely the use value and not the intrinsic value of the resource.[189] It is thus argued that travel cost valuation may significantly undervalue the true worth of the environmental asset that is being assessed.[190] It is also stated that this technique may not have the capacity to assess the impact of small changes on the availability of a resource. That is, individuals may visit the site after the natural resource has been injured in order to use unaffected areas, which defeats the attempts of the travel cost methodology to measure

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[182] Mattson and DeFoor, *supra*, note 20, at 305.

[183] Yang, Dower, and Menefee, *supra*, note 103, at 117.

[184] Anderson and Bishop, *supra*, note 7, at 91; Cross, *supra*, note 1, at 310; and Carson and Navarro, *supra*, note 8, at 827.

[185] Newlon, *supra*, note 6, at 214; Mendelson and Brown, "Revealed Preference Approaches to Valuing Outdoor Recreation" (1983), 23 Nat. Resources J. 607, at 611; and Yang, Dower, and Menefee, *supra*, note 103, at 117.

[186] Anderson, *supra*, note 6, at 444.

[187] Cross, *supra*, note 1, at 313.

[188] Newlon, *supra*, note 6, at 214.

[189] Cross, *supra*, note 1, at 313-15, and Duffield, *supra*, note 145, at 71.

[190] Cross, *supra*, note 1, at 313.

the economic harm.[191] In addition, it is argued that tourists' lack of information on the quality of the environmental resource may distort the results of travel cost valuation.[192] Another alleged weakness of this approach is that it is frequently difficult to amass accurate data.[193] It is also asserted that the travel cost procedure does not take into account the views of people who lack the financial means to travel.[194]

Notwithstanding these criticisms, the travel cost method is considered to be a reliable technique to measure the use value of recreational sites. It is a firmly established methodology in the field of recreational economics and in limited contexts provides an accurate value of a natural resource.

(e) The Hedonic Price Method

Another technique developed by economists to assess the value of public goods is the hedonic price method. The hedonic price method, also known as the characteristics approach, the household production approach, or the property value approach, was first used in the 1960's.[195] This technique attempts to "capture the value of a non-marketed resource as a measurable component of a marketed resource".[196] In other words, it calculates the degree to which the value of a non-marketed good, such as a pristine environment, is reflected in the price of a marketed good, such as land.[197] For example, the hedonic price method can calculate the value of air quality changes by linking high levels of pollution to lowered housing prices.[198] Economists estimate the value of clean air by examining the willingness of homeowners to pay a premium to reside in unpolluted neighbourhoods.[199]

The most common use of the hedonic price technique is in property value studies. The hedonic price method is based on the assumption that the price of a marketed good, such as a house, is a function of its different

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[191] *Ibid.*, at 311.

[192] *Ibid.*

[193] Anderson, *supra*, note 6, at 444.

[194] Cross, *supra*, note 1, at 313.

[195] Anderson and Bishop, *supra*, note 7, at 105, and Yang, Dower, and Menefee, *supra*, note 103, at 63.

[196] Anderson, *supra*, note 6, at 444.

[197] Cross, *supra*, note 1, at 313.

[198] *Ibid.*

[199] *Ibid.*, and Anderson, *supra*, note 6, at 444.

characteristics.[200] It is stated that many environmental assets, such as wetlands, water frontage, and air quality, can be accessed from one's home and that individuals will frequently pay a portion of money to have these amenities. Economists explain that if the demand for such amenities can be inferred from the price of houses, then the value of the non-marketed environmental asset can be determined.[201]

The hedonic price method is considered to be a sound technique to estimate values where the environmental assets are similar to the assets embedded in private properties.[202] It has been credited with being a reliable means of assessing harm to the environment as it is based on market transaction data. This is by contrast to the contingent valuation method which, as previously mentioned, is based on hypothetical transactions.[203]

It is important to be cognizant of the deficiencies inherent in this valuation method. The hedonic price method is limited in the range of non-market goods that it is capable of valuing. In fact, it has been asserted that this technique is unable to measure environmental damage in most situations.[204] In the opinion of one author, "[t]he best tool for hedonic pricing of environmental amenities is property values, but the lack of a market for most public resources limits the utility of this tool".[205] For example, it is asserted that the hedonic price method would likely be of little assistance in measuring harm to the environment that has occurred as a result of a hazardous waste release or an oil spill.[206] Moreover, commentators have argued that under this approach, the environmental values of those not owning property are not taken into account.[207] In addition, it is essential to observe that the hedonic price method, like travel cost valuation and market valuation, measures only the use value of environmental assets and, therefore, fails to assess the intrinsic value of these assets.[208]

Anderson and Bishop have stated that, in order to assess the applicability of the hedonic price method to a particular situation, affirmative answers to the following questions must be obtained:[209]

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200 Mitchell and Carson, *supra*, note 145, at 80.

201 Anderson and Bishop, *supra*, note 7, at 105.

202 Yang, Dower, and Menefee, *supra*, note 103, at 65.

203 *Ibid.*, at 66.

204 Cross, *supra*, note 1, at 313-14.

205 *Ibid.*

206 Yang, Dower, and Menefee, *supra*, note 103, at 65.

207 Anderson and Bishop, *supra*, note 7, at 129.

208 Cross, *supra*, note 1, at 310.

209 *Supra*, note 7, at 115.

> First, is the link between the environmental good (e.g. clean air) and the corresponding environmental attribute (e.g. particulate concentrations) firmly established in the minds of property owners? Second, is the environmental good likely to be valued by buyers and sellers of housing?

Likewise, Mitchell and Carson in their discussion of the problems associated with the hedonic price method, are of the view that in order for this approach to be of value in determining the worth of environmental goods, individuals must be aware of the "actual physical differences in the levels of the characteristic being valued".[210] However, this information may not be available to consumers who, for example, may not be cognizant of the risk levels posed by chemicals or by colorless and odorless air pollutants. Some of the other shortcomings of the hedonic price technique canvassed by Mitchell and Carson are the following:[211]

> First, the data requirements for a valid hedonic pricing study are unusually exacting. It must be possible to control for all relevant characteristics—structural, neighborhood, and environmental; where many or unique resources are already in public hands, this may be impossible. Second, sufficient market data for reliable estimations are difficult to obtain. Housing turnover, for instance, is relatively slow, and it is not easy to locate genuinely comparable houses in relevant neighborhoods.... [In addition] expectations about changes in the good being valued and other relevant characteristics are generally unobservable, but presumably enter into the determination of prices, especially of property values. For example, people may assume that air quality in a given location is going to improve or decline and incorporate this assumption into their willingness to pay or to accept a given purchase price.

In summary, although the vast proportion of economists are of the opinion that the hedonic price method is useful in specific circumstances, there is a minority of professionals in the environmental field who subscribe to the view that this technique is extremely complex, is still largely in the experimental stage and, therefore, ought to be confined to the "world of research, rather than practice, in damage valuation".[212]

4. CONCLUSION

It is the view of the Commission that, in selecting the methodology to measure damages for harm caused to the environment, the ultimate goal of the courts should be to ensure that the environment is put in the same position after the mishap as it was before the injury. The essential problem with assessing damages in the environmental context is that environmental

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[210] *Supra*, note 145, at 81.

[211] *Ibid.*, at 80-81.

[212] Yang, Dower, and Menefee, *supra*, note 103, at 66. See, also, Newlon, *supra*, note 6, at 215.

resources are more difficult to value than private goods.[213] The predisposition of the courts when confronted with environmental assets, goods with often unknown economic value, is to ascribe to these assets either no or very low economic value.[214] The courts have generally relied upon market valuation, the traditional method to measure damages to private goods. As previously discussed at length, market valuation is usually inappropriate to assess environmental damage as markets are frequently lacking for the injured or destroyed goods.

The Commission has presented several methodologies—contingent valuation, restoration and replacement cost, market valuation, the hedonic price method and travel cost valuation—that the courts should draw upon in assessing damages for environmental harm. The attractive features as well as the limitations of each approach have been described. The Commission is of the view, and accordingly recommends, that a rebuttable presumption should exist in favour of restoration cost, replacement cost, and contingent valuation, as these methodologies best ensure that the environment is returned to its pre-contaminated condition. These techniques measure both intrinsic value and use value; this enables the court to ascertain the full economic worth of an environmental asset. By contrast, market valuation, the hedonic price method, and travel cost valuation ought to be employed only in the narrowly circumscribed situations previously discussed. A fundamental deficiency of these three approaches is that they measure solely use value, which too often will significantly underestimate the worth of our resources.

The awarding of adequate levels of compensation so that society will be made whole is of utmost importance in order to deter polluters and to ensure the continued existence of our ecosystems. As one author has written, "[u]ltimately, humans are at the mercy of this planet's nature"[215] and an accurate assessment of damages against those responsible for environmental harm will help to ensure the perpetuation of flora, wildlife and the human species.

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[213] Anderson and Bishop, *supra*, note 7, at 90.

[214] Bishop, Heberlein, and Kealy, *supra*, note 158, at 633.

[215] Cross, *supra*, note 1, at 333.

CHAPTER 4

ADMINISTRATION OF THE DAMAGES AWARD

The final matter to be considered is the administration of an award of damages for environmental harm. As we explained in chapter 1, this difficult issue arises from the fact that the purpose of the award is not to compensate a plaintiff for his own loss,[1] but to redress an injury to the environment, which is suffered by the public generally. Such damages cannot therefore be given to the plaintiff for his own personal use. Damages for environmental harm have a "public" purpose to which they must be dedicated.

In view of the very different nature of these damages, three practical questions must be addressed. First, to whom should the award of damages be paid? Second, should there be some measure of control over the use to which the damages may be put? Third, if control should be exercised, what body should have this responsibility?

In pondering these matters, we sought guidance from other jurisdictions. The logical place to begin our inquiry was the Law Reform Commission of British Columbia's *Report on Civil Litigation in the Public Interest*.[2] While the report dealt primarily with the problem of standing, the Commission recommended that an individual who is able to bring an action for public nuisance, pursuant to its proposals for reform of the law of standing, should be entitled to claim "an award as to damages in the amount of the loss or damage suffered by the public at large".[3]

The Law Reform Commission of British Columbia recommended that damages for public nuisance should be payable to the Attorney General, regardless of whether the Attorney General was a party to the proceedings.[4] It further recommended that, where "public damages" are ordered, notice must be given to the Attorney General, who would have a right to make submissions concerning the proper disposition of the award.[5]

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[1] Depending on the circumstances, both damages for environmental harm and damages for individual losses may be claimed in a single action.

[2] Law Reform Commission of British Columbia, *Report on Civil Litigation in the Public Interest*, LRC 46 (1980) (hereinafter referred to as "British Columbia Report").

[3] *Ibid.*, at 78.

[4] *Ibid.*

[5] *Ibid.*

The Commission was not entirely clear on the question of control over the damages award, for there appears to be some inconsistency between the language of the draft legislation appended to its report and its textual discussion. The proposed statutory provision states that the damages payable to the Attorney General "shall be spent by the Attorney General . . . in whatever manner he considers appropriate to remedy the effect of the nuisance".[6] This seems to indicate that the Attorney General would enjoy a complete discretion in deciding how the damages award is to be applied to remedy the consequences of the public nuisance. The textual discussion, however, suggests that the Attorney General would be subject to the direction of the court, which could order how the damages are to be used as a remedy:[7]

> We recommend that the court should have a complete discretion whether or not to make such an award, and if it should decide to make such an award, it should have the power to direct how the award is to be applied and disbursed. Any such award should be payable to the Attorney General who would then have a duty to spend the amount awarded to remedy the damage caused by the nuisance.

We also considered the experience in the United States. Although no legislation in the United States confers on individuals a right to claim damages on behalf of the public, there are interesting features in certain environmental statutes. At the federal level, under the Comprehensive Environmental Response, Compensation and Liability Act,[8] known as "Superfund", the United States government or a state may recover damages, as trustee of natural resources, "[i]n the case of an injury to, destruction of, or loss of natural resources"[9] caused by the release of a hazardous substance. Even though the measure of damages is not limited by the amounts necessary to restore or replace the natural resources,[10] the sums recovered may be used only "to restore, replace, or acquire the equivalent of such natural resources".[11] Under the legislation, the President must designate federal officials as trustees of natural resources, and the Governor of each state similarly must designate state officials as trustees.[12]

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[6] *Ibid.*, at 75.

[7] *Ibid.*, at 71. The Summary of Proposals, appearing in Appendix A to the report, does not address this issue: *ibid.*, at 77-78.

[8] 42 U.S.C. §§9601-9675 (1980), as am. by The Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613 (1986).

[9] *Ibid.*, §9607(f).

[10] See discussion, *supra*, ch. 3, sec. 3(b)(i).

[11] *Supra*, note 8, §9607(f)(1).

[12] *Ibid.*

The Commission's very general survey of state legislation indicates that certain states have created special environmental funds dedicated to environmental rehabilitation. These funds are generated by penalties or damages awards recovered by the state. For example, in Florida, the Pollution Recovery Fund receives moneys recovered by the state for violations of environmental legislation. The money must first be applied to restore the area affected by the violation "or to otherwise enhance pollution control activities" in the area; any surplus funds may be applied to restore other areas.[13] In Illinois, there are three separate funds—the Environmental Protection Trust Fund, the Wildlife and Fish Fund, and the Hazardous Waste Fund—each with different purposes and sources of funds.[14]

Both the report of the Law Reform Commission of British Columbia and the American statutes to which we have referred reflect a view that the public dimension of environmental damages requires that the administration of the award be entrusted to government. On the question of who should receive the damages, we have come to the same conclusion. Accordingly, we recommend that an award of damages for environmental harm should be given to a special government body, with the express mandate to administer such awards, rather than to the plaintiff. While this proposal obviously represents a dramatic departure from the usual model of civil litigation, we believe that it is warranted by the particular purpose, and therefore the special character, of this award of damages. Regardless of the method of the damages assessment chosen by the court, the purpose of the award is to redress, on behalf of the general public, a harm to the environment. As we shall explain shortly, the award of damages will be used either to restore or replace the site that has been injured by the defendant or to rehabilitate the environment in a manner that is thought appropriate by the government body. Applying the damages for the purpose of restoration or replacement or for rehabilitation are responsibilities that will demand suitable expertise and knowledge. For this reason, and also because it will assure public accountability, the award should be given to the government body described more fully below.

The more narrow task of using the damages award for restoration or replacement may be more or less difficult, depending on the particular circumstances. Conceivably, it may be an onerous, complex undertaking, which may require that the government body seek the advice and expertise of consultants and scientists with a specialized knowledge of hydrology, zoology, botany, and other disciplines. Conversely, in some situations restoration or replacement may be less complicated—for example, where restoration involves the re-introduction of a species of fish or bird into a

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[13] Fla. Stat. Ann. §403.165 (West).

[14] Penalties for contravention of the *Environmental Protection Act* are paid into the Environmental Protection Trust Fund. Persons causing the death of fish or aquatic life are liable to penalties and "an additional sum for the reasonable value of the fish or aquatic life destroyed". These amounts are to be place in the Wildlife and Fish Fund: Ill. Stat. Ann. §§1042 and 1061 (Smith-Hurd).

habitat that has not been rendered inhospitable by the environmental harm in question. Yet even a relatively limited undertaking such as this must be conducted properly with due care and skill.

Where restoration or replacement is not to be effected, the problem of determining how damages are best to be used to rehabilitate the environment obviously is more complex, involving, among other things, the knowledge and sensitivity to balance competing interests and priorities.

As we indicated earlier, a second question concerns whether the use to which damages may be put should be subject to some sort of control: should the purposes for which the award may be used be specified, whether by legislation or by the court, or left to the unfettered judgment of the custodian to which the damages are entrusted?

In the balance of this chapter, we shall describe the scheme that we propose for the administration of damages that have been awarded for environmental harm. The foundation of our approach is the belief that the most important factor bearing upon whether, and the extent to which, the government body should be subject to control, is the particular method of damages assessment chosen by the court.

The restoration cost method and the replacement cost method are assessment methodologies that are premised on a specific use of the damages in ameliorating the effects of harm caused to the environment. By contrast, the other methodologies—market value, contingent valuation, travel cost valuation, and hedonic price method—seek to measure the extent of the environmental injury or loss without any regard to the ultimate application of the damages that are assessed.

Where the restoration cost method or the replacement cost method is used to assess damages, we recommend that the government body should be under a statutory duty to effect restoration or replacement in any manner it deems appropriate. In certain cases, the judgment of the court will give some guidance about the nature and extent of restoration or replacement to be implemented.

Where, however, damages are assessed pursuant to a method other than the restoration cost method or the replacement cost method, the damages should be given to the government body without any direction whatsoever. In such a case, we recommend that the government body should be under a statutory duty to use the funds for the purposes of environmental rehabilitation. How this duty is to be discharged should rest entirely in its discretion.[15]

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[15] If a plaintiff is of the view that the government body is not discharging its statutory duty, either to use the award of damages to effect restoration or replacement or to dedicate the award to environmental rehabilitation, under existing law she can apply to the court to compel performance of the duty.

Before turning to discuss the government body that would be given a critical role under the regime proposed in this chapter, there are two further matters we wish to address. First, we are of the view that it would be salutary if notice of proceedings seeking damages for environmental harm were given to both the Minister of the Environment and the Minister of Natural Resources, each of whom has responsibility for protection of the environment under Ontario legislation. Notice would facilitate intervention in the proceedings by either Minister. The Crown may wish to make submissions on the assessment or administration of damages, especially where the award may ultimately be employed in the restoration or replacement of an affected site, a matter on which the Crown may have its own views, policies, and priorities. Indeed, the Crown may wish to challenge the standing of the plaintiff to commence and maintain the proceedings. We therefore recommend that, where an action is brought seeking damages for environmental harm, notice of the proceedings should be given to both the Minister of the Environment and the Minister of Natural Resources, and that further notice should be given to such other Minister as the court directs.[16]

The second matter relates to the assessment of damages as well as to the administration of the award. We have already emphasized that, depending on the particular circumstances, the difficulty of effecting restoration or replacement will vary. Inevitably, some degree of administrative expense will be associated with either endeavour. In our view, this is a cost that should not be imposed on the government body. Otherwise there necessarily will be a commensurate diminution in compensation, which will detract from the cost internalization that is one of the fundamental objectives of this remedy.[17] Administrative expenses, insofar as they can be predicted, should also be imposed on defendants. We therefore recommend that, where a court awards damages for environmental harm, it should order, in addition, the estimated administrative costs associated with restoration or replacement, as the case may be.[18]

The final matter we shall discuss is the nature of the government body under our proposed scheme. From the foregoing account, it should be apparent that this body will have two main functions. Where the basis of assessment is the restoration cost method or the replacement cost method,

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[16] With respect to analogous recommendations, see Ontario Law Reform Commission, *Report on the Law of Standing* (1989), at 135-36.

[17] *Supra*, ch. 2, sec. 2.

[18] Where the court assesses damages by a method other than the restoration cost method or the replacement cost method, it will not be possible to estimate an amount in connection with administrative costs, for the damages will be given to the government body to be used for the purpose of environmental rehabilitation in a manner thought appropriate by that body. The damages will form part of a common pool of funds on which the government body may draw. Until the damages are actually used, the administrative costs will be unknown.

the duty of the government body would be to use the funds for restoration or replacement. Should neither of these methods be used, the funds would be specifically dedicated to the rehabilitation of the environment, in any manner deemed appropriate by the government body.

Specific legislation would appear to be necessary to ensure that the government body has the legal capacity to use the damages for the purposes that we have described. Under the *Financial Administration Act*,[19] "all public money shall be deposited to the credit of the Treasurer".[20] Any moneys received by the government or any agency would thus form part of the Consolidated Revenue Fund.[21] Given our view that the award of damages should be dedicated to the specific purpose of ameliorating the effects of environmental harm, legislative intervention would appear to be necessary to make certain that these funds are, at the very least, notionally separated and preserved. This may require the establishment of a special account within the Consolidated Revenue Fund.[22] It is our recommendation that legislation should be enacted that would ensure that, where damages are paid to the government body, they shall be applied for restoration, replacement, or rehabilitation of the environment.

Thus far, we have been deliberately vague concerning what body will be given the mandate that we have recommended under our proposed

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[19] R.S.O. 1980, c. 161.

[20] *Ibid.*, s. 2(1). Section 1(l) of the Act states as follows:

> 'public money' means all money belonging to Ontario received or collected by the Treasurer or by any other public officer or by any person authorized to receive and collect such money and includes,
>
> (i) special funds of Ontario and the income and revenue therefrom,
>
> (ii) revenues of Ontario,
>
> (iii) money raised by way of loan by Ontario or received by Ontario through the issue and sale of securities, and
>
> (iv) money paid to Ontario for a special purpose.

"[M]oney paid to Ontario for a special purpose" is defined to include "money that is paid to a public officer under or pursuant to a statute, trust, undertaking, agreement or contract and that is to be disbursed for a purpose specified in or pursuant to such statute, trust, undertaking, agreement or contract": *ibid.*, s. 1(j).

[21] "Consolidated Revenue Fund" is defined to mean "the aggregate of all public moneys that are on deposit at the credit of the Treasurer or in the name of any agency of the Crown approved by the Lieutenant Governor in Council": *Financial Administration Act*, *supra*, note 19, s. 1(b), and *Ministry of Treasury and Economics Act*, R.S.O. 1980, c. 291, s. 1(b).

[22] There is precedent for the establishment of special accounts in the Consolidated Revenue Fund: see *Public Transportation and Highway Improvement Act*, R.S.O. 1980, c. 421, s. 115; *Ontario Northland Transportation Commission Act*, R.S.O. 1980, c. 351, s. 36; and *Ontario Water Resources Act*, R.S.O. 1980, c. 361, ss. 40 and 41.

scheme. We have simply referred to a "government body". While we are confident about the responsibilities that we have given it, we are considerably less certain about whether an entirely new entity should be created by statute, or whether the necessary authority should be given to an existing body or agency, with its statutory mandate being amended if necessary.

We have rejected the possibility of simply relying on the Ministry of the Environment to discharge the two responsibilities that we have outlined above. While its title would seem to suggest that it is the logical candidate for this role, in fact the Ministry of the Environment is not the exclusive Ministry charged with the protection of the natural environment. The Minister of Natural Resources is responsible for a number of statutes bearing directly upon the environment.[23] Given this division of responsibility, the Ministry of the Environment should not be the "government body" for the purposes of the proposed scheme. It would be preferable to rely on a government body or agency with a sufficiently broad focus on the environment.

We are well aware that a study of regulatory agencies in Ontario has been recently published,[24] which makes recommendations for the rationalization and consolidation of a number of agencies, including certain ones active in the environmental field. Undoubtedly, this report will generate a debate about the place of agencies within the governmental and administrative structure in Ontario.

Should it be considered advisable not to create a new Crown agency to perform the role that we envisage, an existing agency that might be well-suited to this task is the Environmental Compensation Corporation ("ECC"), established under Part IX of the *Environmental Protection Act*,[25] the so-called "Spills Bill". Its responsibilities under Part IX include authorizing payments in connection with spills to persons who have suffered loss or damage, and to persons who have incurred reasonable costs and expense in carrying out, or in attempting to carry out, orders or directions under Part IX. Such orders may, for example, require a person to eliminate or ameliorate the adverse effects of spills or to restore the natural environment.

Certain features of the ECC suggest that it may be appropriate for the purposes described in this chapter. First, it is concerned with responding to environmental problems, at least those caused by spills of pollutants, and has developed knowledge and practical experience in the course of its

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[23] See, for example, *Conservation Land Act, 1988*, S.O. 1988, c. 41; *Endangered Species Act*, R.S.O. 1980, c. 138; *Game and Fish Act*, R.S.O. 1980, c. 182; *Lakes and Rivers Improvement Act*, R.S.O. 1980, c. 229; *Mining Act*, R.S.O. 1980, c. 268, ss. 112-15 and 162; and *Public Lands Act*, R.S.O. 1980, c. 413.

[24] Ontario, *Directions: Review of Ontario's Regulatory Agencies* (1989).

[25] R.S.O. 1980, c. 141.

existence. Second, the ECC has the authority to retain "the services of persons having technical or specialized knowledge".[26] Third, it has the power to appoint inspectors to conduct investigations in connection with spills of pollutants.[27] Fourth, it is subject to annual audit by the Provincial Auditor,[28] and must report annually to the Minister of the Environment.[29]

One possible shortcoming of the ECC is that its focus, in practice, may not be sufficiently broad to encompass those aspects of the environment that are within the jurisdiction of the Minister of Natural Resources.[30] If this indeed were the case, and if it were thought to be appropriate to use the ECC, its mandate should be expanded to encompass matters within the purview of the Ministry of Natural Resources.

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[26] *Ibid.*, s. 104.

[27] *Ibid.*, s. 105.

[28] *Ibid.*, s. 108.

[29] *Ibid.*, s. 109.

[30] But see the definition of "restore the environment" in s. 79(1)(i) of the *Environmental Protection Act*, which does state that the expression means "restore all forms of life".

SUMMARY OF RECOMMENDATIONS

The Commission makes the following recommendations:

THE NEW DAMAGES REMEDY (CHAPTER 2)

1. Legislation should be enacted to create a new civil remedy, an award of damages payable to compensate the public for harm done to the environment, entirely independent of any damages payable for injury caused to individuals or corporations.

2. (a) The new civil damages remedy should be available to any person who has standing. (See the Commission's 1989 *Report on the Law of Standing*.)

   (b) This remedy should be available to the Crown in right of Ontario.

3. The harm for which damages may be awarded should include a past injury. In addition, a court should be able to award damages in lieu of an injunction in connection with a future harm. Moreover, where a suspended injunction or a partial injunction is ordered, the injury that, by definition, will be permitted to continue, either in whole or in part, should be the basis for an award of damages.

4. In determining whether to order an injunction or damages in connection with environmental harm, the court should be required to balance all the relevant factors, including the public interest in the protection of the environment, the impact on the defendant, and the social and economic consequences of each remedy.

THE ASSESSMENT OF DAMAGES FOR HARM TO THE ENVIRONMENT (CHAPTER 3)

5. A rebuttable presumption should exist in favour of restoration cost, replacement cost, and contingent valuation. Where the presumption is rebutted, the court may utilize market valuation, the hedonic price method or travel cost valuation to assess damages for harm caused to the environment.

ADMINISTRATION OF THE DAMAGES AWARD (CHAPTER 4)

6. The court should be required to give the award of damages to a government body, which should have the statutory duty to use it in accordance with recommendation 9.

7. Where an action is brought seeking damages for environmental harm, notice of the proceedings should be given to both the Minister of the Environment and the Minister of Natural Resources. Further notice should be given to such other Minister as the court directs.

8. Where a court awards damages for environmental harm, it should order, in addition, the estimated administrative costs associated with restoration or replacement, as the case may be.

9. The government body, referred to in recommendation 6, should have the following mandate:

   (1) where the court assesses damages for environmental harm by the restoration cost method or the replacement cost method, to effect restoration or replacement, as the case may be, in any manner it deems appropriate; and

   (2) in all other cases, to apply the award to rehabilitate the environment in any manner it deems appropriate.

10. Legislation should be enacted that would ensure that, where damages are paid to the government body, they shall be applied only for restoration, replacement, or rehabilitation (and for no other purpose), in accordance with recommendation 9.

CONCLUSION AND ACKNOWLEDGMENTS

1. CONCLUSION

When we began this project, we were of the view that the protection of our environment was one of the most pressing issues of our day. Throughout the period that we have been engaged in preparing this report, the strength of this conviction has only intensified. We have been most impressed by the attention that has been given to the environment in the media and other forums, particularly during the last six months.

As we have stated in chapter 2, we have recommended that a new statutory weapon—a civil damages remedy—be added to the armoury now available to resist the degradation of our environment. In this context, the Commission firmly believes that the importance of responsive action, whether by the Crown or by public-spirited persons and groups, cannot be exaggerated. Environmental degradation has become a serious global problem that imposes substantial social and other costs on us all, and for which there is, in the end, no adequate sanctuary.

2. ACKNOWLEDGMENTS

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In the Introduction to this report, we explained that this project evolved out of our 1989 *Report on the Law of Standing*. We would like to acknowledge the contribution of Professor W.A. Bogart, of the Faculty of Law, University of Windsor, who served as director of the standing project, and Mr. W.L. Vanveen, of the Ontario Bar, both of whom prepared for that project excellent background papers that addressed many of the issues discussed in this report. We would also like to thank Ms. M.L. Leitman, a former member of our legal staff, and Ms. M.P. Richardson, former General Counsel to the Commission, both of whom assisted us in our early deliberations about the matters canvassed in this report.

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All of which is respectfully submitted.

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